

# Municipal Journal

## And Engineer

VOLUME XXVI.

NEW YORK, APRIL 21, 1909.

No. 16



## STREET CLEANING *IN* NEW YORK

"WHITE WING" AT WORK AT FIFTH AVENUE AND MADISON SQUARE

THE Department of Street Cleaning of New York has jurisdiction over the cleaning of streets in the Boroughs of Manhattan, Brooklyn and Bronx. In Richmond and Queens the work is in charge of the President of the Borough. With the work of cleaning the streets is included the removal of ashes and garbage as well as of some of the trade wastes. The exact distinction between refuse such as the law requires the department to remove and trade waste, such as the ashes of a steam plant, is not always easily made and leads to considerable dispute. At the present time, owing to deficiencies in appropriations, the Department has refused to remove ashes from factories in Brooklyn. The removal of snow from the main thoroughfares is also a duty of the Department.

Paved streets only are cleaned. They amount in area to about 23,500,000 square yards, or approximately 1,300 miles. Of this about 45 per cent is paved with sheet asphalt, 23 per cent with granite, 12 per cent is macadamized and the remainder is paved with miscellaneous kinds of pavement. During the year 1908 there were carted away by the 2,000 horses belonging to the department 390,000 cart loads of sweepings, containing 610,000 cubic yards, having a weight of 340,000 tons. A force of 2,840 sweepers is now employed in this work.

The composition of street sweepings was found from tests to be: moisture, 37.28 per cent; organic matter, 30.72 per cent; ash, 32 per cent; phosphoric acids, 0.35 per cent; nitrogen, 0.25 per cent. The total cost of the

department for the year 1907 is shown in the accompanying table.

#### Summary of Expenses for the Year 1907

General administration.....	\$36,974.85
Administration—	
Salaries of Clerical force.....	85,002.52
Salaries of uniformed force.....	288,608.12
Sweeping—salaries and wages.....	2,186,378.08
Repairs and supplies.....	93,998.16
Forage for and shoeing horses.....	88,502.71
Carting—	
Salaries and wages.....	1,668,083.48
Repairs and supplies.....	95,280.79
Forage for and shoeing horses.....	303,428.67
Final disposition of material, including cremation or utilization—salaries and wages.....	110,682.17
Cost of final disposition, contracts, towing, hire of scows, repairs and supplies.....	1,150,701.85
Wages, supplies, rents and contingencies—	
Wages.....	47,339.10
Rentals.....	125,869.39
Repairs and supplies to stables and section stations.....	29,547.14
Office supplies, contingencies and telephones.....	10,453.03
Total, working accounts.....	\$6,329,850.06

The expenditure for snow removal was \$2,470,959. For improvements of a more or less permanent nature, and to cover a deficiency in the previous year, \$566,311 was expended.

The cost of cleaning one square yard of pavement a year may be roughly estimated from the figures. The wages and salaries paid to sweepers amount to about 10 cents per square yard a year. The remaining expenses of the department, excluding snow removal and permanent improvements, amount to about \$4,500,000.

The grand total of cart loads of material removed during 1907 was 3,124,004, the sweepings being about one-eighth of that amount. One-eighth of the expenses of the department for carting, disposal and supervision amounts to about 2 cents a square yard over the area cleaned. The total cost per square yard per year of cleaning streets in New York is then about 12 cents.

The cost of cleaning the streets is increasing every year owing to the extension of the area of paved streets in the suburbs and the rebuilding of the city in the business section. The man with the broom is the principal factor in accomplishing the work; even where street sweeping machines are used the white-wings cannot be dispensed with, but follow up the sweepers, completing what they are unable to do. However, Street Cleaning Commissioner William Edwards is endeavor-

ing to find mechanical devices which will reduce the unit costs and is giving trials to all machines which are brought to his notice.

Some unit costs of cleaning streets by the various methods employed are as follows. More detailed figures covering some of these were given in our issue of May 13, 1908.

*Sweeping Machines* clean in a night 70,000 square yards of pavement each at a cost of 32 cents per 1,000 square yards. This includes the cost of sprinkling ahead of the sweeper, but does not include the cost of picking up and disposing of the rubbish, which is done by men and carts. Machine sweeping is objected to because a scale of mud is left on the surface of the pavement, which, when dried, makes the street dusty again.

*Patrol System.*—The ordinary unit of work for a hand sweeper is four blocks, a total of 8,000 square yards, a day. The amount of street actually cleaned by one man varies with the traffic and condition of the pavement. The unit of cost is 28 cents per 1,000 square yards. To show how variable is the amount cleaned by one man, the report of 1907 may be quoted. In Manhattan the actual area cared for by one sweeper averaged 5,468 square yards. In Brooklyn each sweeper averaged 14,129 square yards. Commenting on this the Deputy Commissioner of Brooklyn stated that the quality of the work in that Borough could be called only fair, as in some instances sweepers could barely cover their route once.

*Flushing with Hose.*—A gang of four men with a fire hose will clean 48,100 square yards of pavement, using 90,000 gallons of water; the unit of cost being 32 cents per 1,000 square yards. The objection to this method is that the hose interferes seriously with street traffic and the injury done to some kinds of pavement is considerable. It is, however, a very effective means of cleaning a dirty street quickly and in an emergency.

*Squeegee Machines.*—One of these machines cleans 50,000 square yards of paving per day at a cost of 20 cents per thousand square yards for labor and water. It is stated unofficially that the squeegee uses about 143 gallons per 1,000 square yards. Official figures for the cost of water and of labor separately were not obtainable. This machine was described in our issue of June 10, 1908. A pavement must have a smooth surface and be in fairly good repair in order to allow this machine to do effective work.

*Flushing Machines.*—One machine cleans 28,000 square yards per day at a cost of 72 cents per thousand square yards for labor and water. During tests made with them it was found that the machines use about 2,000 gallons of water per 1,000 square yards cleaned. Water is charged against the machines at the rate of 9 cents per 1,000 gallons.

An estimate of the cost of cleaning by sweeper, squeegee and flusher, has been furnished us, and is presented herewith. It is not official, and may not be thoroughly accurate, but is of service in giving some idea of several costs.



SQUEEGEE AT WORK ON FIFTH AVENUE

## Cost of Street Cleaning by Several Appliances

## SWEEPING MACHINE

<i>Cost of Plant</i>	
1 machine.....	\$275.00
1/2 sprinkling cart.....	104.00
2.2 Horses, @ \$250 for machine.....	550.00
0.55 Horses, @ \$250 for sprinkler.....	137.50
2 1/2 sets of harness.....	112.50
Total.....	\$1,179.00
<i>Fixed Charges</i>	
Interest, repairs and depreciation @ 20%.....	\$235.80
Rent @ \$5 per month per machine.....	90.00
Insurance @ \$2.50 per \$1,000.....	2.99
Refilling brooms @ \$10.00 per 3 weeks.....	173.33
Total.....	\$502.12
<i>Operating Cost</i>	
Machine driver.....	\$2.00
1/2 sprinkler driver.....	1.00
Maintenance of horses @ 90c.....	2.48
Total.....	\$5.48
Per 1,000 square yards (70,000 square yards per day).....	\$0.0793
Water, 200 gallons @ 9c. per 1,000.....	.0180
Fixed charges on a basis of 200 days' service.....	.0359
Total cost per 1,000 square yards cleaned.....	\$0.1332

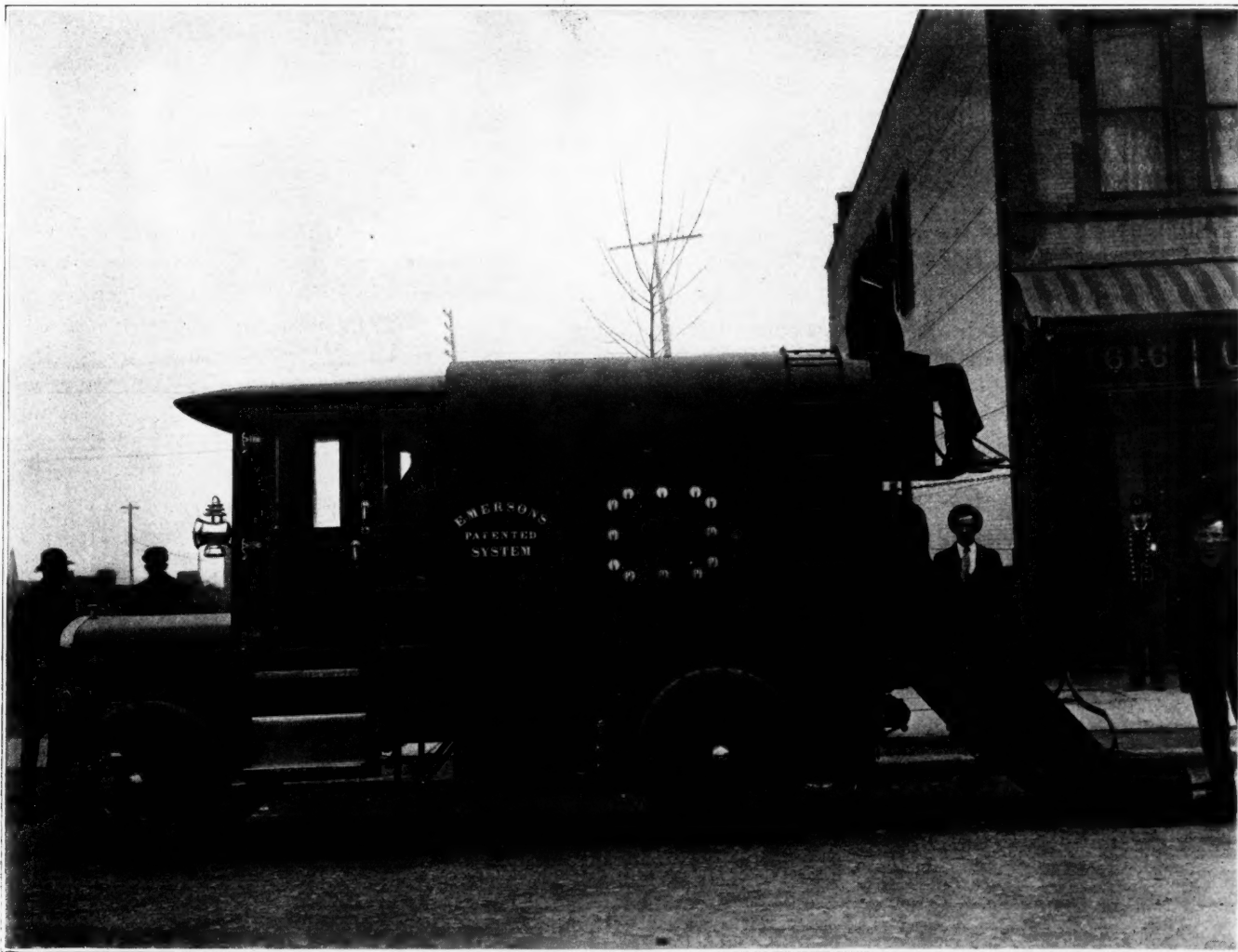
## SQUEEGEE MACHINE

<i>Cost of Plant</i>	
1 machine.....	\$1,250.00
2.2 horses @ \$250.....	550.00
Two sets harness.....	90.00
Total.....	\$1,890.00
<i>Fixed Charges</i>	
Interest, repairs and depreciation @ 20%.....	\$378.00
Rent @ \$5 per month per machine.....	60.00
Insurance @ \$2.50 per \$1,000.....	4.73
One new squeegee.....	120.00
Total.....	\$562.73
<i>Operating Cost</i>	
Machine driver.....	\$2.00
Maintenance of horses @ 90c.....	1.98
Total.....	\$3.98
Per 1,000 square yards (50,000 square yards per day).....	\$0.0796
Water, 143 gallons @ 9c. per 1,000 gallons.....	.0129
Fixed charges, on a basis of 200 days' service.....	.0563
Total cost per 1,000 square yards cleaned.....	\$0.1488

## FLUSHING MACHINE

<i>Cost of Plant</i>	
1 machine.....	\$1,000.00
2.2 horses @ \$250.....	550.00
Two sets harness.....	90.00
Total.....	\$1,640.00
<i>Fixed Charges</i>	
Interest, repairs and depreciation @ 20%.....	\$328.00
Rent and insurance.....	64.10
Total.....	\$392.10
<i>Operating Cost</i>	
Machine driver.....	\$2.00
1/2 helper.....	1.00
Maintenance machine horses.....	1.98
Total.....	\$4.98
Per 1,000 square yards (28,000 square yards per day).....	\$0.1779
Water, 2,000 gallons @ 9c. per 1,000.....	.1800
Fixed charges on a basis of 200 days' service.....	.0700
Total cost per 1,000 square yards cleaned.....	\$0.4279
Omitting the charge for water the costs as estimated above are 11.52 cents, 13.59 cents, and 24.79 cents respectively.	

*Automobile Pneumatic Cleaner.*—One of the new machines being tried is an automobile street-cleaning machine, invented by A. S. Emerson, an engineer of many years' experience in street railway work, which sweeps and picks up the dirt. He has constructed only three machines, two of which are being operated experimentally in London, England, and one in New York. The pneumatic principle is employed to pick up the dirt and, as is usual in pneumatic cleaning, a finer dust is removed than is possible with brushes. The machine consists of an automobile chassis carrying an engine in the usual position. A closed cab in front carries the operator. Back of the cab is a large aluminum tank having a capacity of about 8 cubic yards. The cleaning



AUTOMOBILE PNEUMATIC CLEANER





REAR VIEW OF EMERSON CLEANER

Commissioner "Big Bill" Edwards at left of machine

and picking-up apparatus is hung at an angle from the back of the wagon and is under control of a man occupying a seat above it and facing backwards. The details of the construction are not given out by the inventor, but they combine the sweeping and suction principles. The whole apparatus is enclosed so that no dust escapes during operation, and the machine can be operated in the day time on a busy street without creating a nuisance. The extreme length of the whole machine is 22 feet. The New York machine is 5 feet wide and those sent to London 7 feet. The operating part extends about flush with the hubs of the wheels, so that it has been found in practice to do effectual work to within  $2\frac{1}{2}$  inches of the curbstone. The machine can be operated at a speed of eight or ten miles an hour, but it is hardly to be expected that it will make that speed in actual service. When loaded it can go to the dump at a speed of 15 or 20 miles an hour, as it has a 40 hp. engine. The company controlling the machine does not expect to place it on the market for sale but prefers to contract for street cleaning at a unit price.

#### WORK OF OTHER DEVICES

Last winter a machine was used for removing snow which, while not itself new, had not before been used for this purpose in New York. This was an ordinary dirt road scraper, and, working in pairs, these were found very efficient in piling up the snow for removal by carts.

Another machine on trial is the Charlton gutter sweeper, which picks up as well as sweeps. The machine consists of an ordinary brush of less than usual length, a specially constructed wheel provided with pockets for picking up sweepings and a receptacle into which the dirt is dropped. The wheel has a tire about

8 inches wide, and in place of the ordinary spokes is a continuous sheet of iron attached to the outer side of the rim. The brush carries the sweepings into pockets on the inside of the rim or tire, which, when they reach the highest point as the wheel revolves, deliver the sweepings through a chute into a receptacle containing about one-half a cubic yard. The machine does its work fairly well, but has not commended itself so far by showing any gain in economy over ordinary methods.

A device which promises to be of practical value is a dustless cart cover. An employee of the department, a driver named Frawley, has devised a cover suitable for use on the ordinary one-horse iron-bodied cart. A large but undetermined amount of the dust blown about on and removed from the streets arises from the ash



FRAWLEY DUSTLESS CART COVER, DUMPING

carts when ash cans are emptied into them. The new cover is designed to prevent this. It consists of an iron frame work carrying canvas sides and top. Hinges at the top allow either side to be lifted up when a can is to be dumped into it. Another hinged cover at the back opens when the cart is dumped. The total weight of the frame work and canvas is 80 pounds. It is the



NEW YORK RUBBISH CART, HOLDING EIGHT YARDS



## Bureau of Street-Cleaning, Borough of Richmond—Statement of Classified Expenditures for 1907

	Super- vision	Labor	Carts	Teams	Supplies	Stable Main- tenance	Totals	Quantities	Unit Costs
Sweeping.....	\$7,282.04	\$48,322.49	\$21.92	\$798.06	\$1,427.94	\$896.11	\$58,748.56	16,333 miles.	\$3.60 per mile.
Refuse collection and removal.....	1,613.54	234.87	57,872.85	362.74	218.25	361.14	60,663.39	110,798 cu. yds.	.55 per cu. yd.
Final disposition, ashes.....	564.49	3,905.83	208.40	90.19	53.49	67.32	4,889.72	106,883	.05
Final disposition, garbage.....	420.00	2,227.55			1,683.61		4,331.16	2,001 tons.	2.16 per ton.
Snow removal.....	648.33	3,501.58	4,315.38	827.64	81.64	58.96	9,433.53	64,902 cu. yds.	.15 per cu. yd.
Cleaning gutters.....	1,660.80	11,323.58		3.22	198.17	194.57	13,380.34	2,302 miles.	5.81 per mile.
Cleaning sidewalks.....	447.84	473.08			31.90	5.00	957.82	28.6 "	33.49 "
Cleaning crosswalks.....	349.08	2,454.73			35.80	41.50	2,881.11	360 "	8.00 "
Spreading ashes.....	336.18	2,206.51	610.29	374.31	38.35	39.00	3,604.64	3,594 cu. yds.	1.00 per cu. yd.
Spreading grits.....	2.06	7.17	37.73	6.14	50.40		103.50	313 "	3.29 "
Spreading screenings.....	1.76	10.71			34.62		47.09	164 "	2.90 "
Light repairs, macadam roads:									
In charge of B. S. C.....	267.27	1,475.97	1,095.84	728.29	4,757.03	36.28			
Charged to R. L. & R. R. Co.....	1.54	8.45	5.11	4.91	46.17		8,447.22	2,629 "	3.21 "
Charged to S. I. Mid. R. R. Co.....	.92	4.44	3.04		11.96				
Light repairs, surfacing macadam roads:									
B. S. C.....	19.53	126.74		.58			146.85	913 "	.16 per cu. yd.
Weeding.....	247.46	1,594.82	62.12		13.51	26.32	1,944.23	462,755 sq. yds.	.42 per 100 sq. yds.
*Miscellaneous.....		4,998.16	159.10	110.85	1,454.86	5,739.89	12,462.86		
	\$13,862.84	\$82,876.68	\$64,391.78	\$3,306.93	\$10,137.70	\$7,466.09	\$182,042.02		

\*Miscellaneous includes General Administration; credits to Bureaus of Engineering, Highways, Sewers and Public Buildings; General Work; Refuse Destructor; Painting; Grading; Experimental Work; Encumbrances, and Capital Investment Account.

intention to adopt the use of these covers, and they will be manufactured at the State Penitentiary at Sing Sing, where the law requires such apparatus to be made.

Nearly all the rubbish collected is carted to a number of dumping platforms at the various docks and is carried on scows to the point of discharge. Garbage goes to a reduction plant or is dumped far out at sea. The inorganic material is taken to Rikers Island, where it is used for filling land which belongs to the city. Last fall the filling of an area of 63½ acres was completed and a new fill on the other side of the island was started which will comprise an area of 147 acres.

In 1907 the disposition of material, by cart loads, for the boroughs of Manhattan, the Bronx and Brooklyn was as follows:

## Disposition of Material Collected in New York

At sea and behind bulkheads.....	1,855,303.00
At Barren Island, garbage.....	314,933.25
On private scows.....	124,384.50
At incinerators.....	37,563.75
At inland dumps.....	226,448.75
By American Railway Traffic Company.....	563,601.00
Sunk in slips.....	1,770.25

Grand total, cart loads..... 3,124,004.50

In the table above are given the classified expenditures of the Bureau of Street Cleaning of the Borough



PILING SNOW WITH CLIMAX ROAD SCRAPERS

of Richmond, which show very accurately and in detail the nature and cost of the work done there. The completeness of these records was made possible by use of the system described in our issue of July 3, 1907. The streets in this borough which were cleaned included 74.3 miles of macadam, 6.9 of asphalt block, 1.1 of sheet asphalt, 5.4 of granite block, and 0.9 of brick, wood block and iron slag. The average width of these streets was about 30 feet between curbs. The system of street cleaning in use has been mainly by hand patrol. Some machine broom sweeping is performed during early morning hours, but lack of water prevents a more extensive use of this method. The flushing of paved streets is also impossible for the same reason. In connection with the ordinary cleaning some weeding by hand was necessary, although the extension of paved gutters is gradually reducing this. Efforts were made to secure a substitute for "Herbicide" (a liquid weed killer) which would not contain poisonous ingredients, and it is possible that iron sulphate or copper sulphate may prove suitable for killing off certain classes of weeds without danger to animals. A small weed-burning machine was tried, but it was found that the heat furnished by it did not prevent the weeds springing up again in a short time.

#### ASPHALTING ROADS IN NEW JERSEY

THE annual report of the Commissioner of Public Roads of New Jersey for the year 1908, contains, besides statements concerning the general conditions and work done upon the roads in each of the counties of the State, descriptions of special work done in Mercer and Camden counties. The work in the former was done upon what is known as the Lawrenceville and Princeton road, the width of the macadam on which is 14 feet and its depth 6 inches. The treatment is described in the report as follows: "On this road asphaltum oil was used as a cementing binder for the first time in the history of New Jersey road construction, and many valuable and important facts about its application were learned. It was first applied upon the 1½-inch stone, after the same had been thoroughly bonded and rolled, but it was found that the heavy asphaltum oil would not penetrate the consolidated road-bed. It was therefore necessary to loosen up the stone before the application of the oil, and on the remainder of the work the asphaltum oil was applied to the 1½-inch stone without the use of any other binder. After sprinkling the oil, which had been previously heated, a layer of stone screenings was spread upon the road and rolled until the oil was forced through the surface, when more screenings were applied, and this process continued until the oil ceased to show upon the surface. The results have more than equaled our expectations, as the road is not only dustless but practically noiseless and very resilient. If this pavement stands the freezing and thawing effects of the winter and spring, we feel that the dust problem will have been practically solved in the State of New Jersey." The cost of applying asphalt to 25,170 square yards was \$2,076.53, or 8¼ cents per square yard.

County Engineer J. J. Albertson, of Camden county, refers to numerous methods tried for preservation of the macadam roads. Petroleum dressing was found to be but a temporary relief; the use of a refined tar product, which cost \$450 per mile, including screenings, did not quite meet their expectations, but the application was repeated last year and will probably need to be repeated every year. Oiled dirt roads, in which asphaltum oil was mixed with pulverized soil of the road itself, were tried in Gloucester county, and the first result was found to be excellent. A section about 2.4 miles long was treated with heavy Kentucky asphaltum oil heated to limpidity by steam pipes, which was sprinkled as a binder on the top course of stone before rolling, in one application of 3 quarts per sq. yd.

Mr. Albertson states that an apparently successful experiment in Camden county was made on the Evesham road, which was used as a demonstration road, with the permission of the county authorities, by Mr. Joseph H. Amies, of Philadelphia. "He offered to put the top coat on the four-inch macadam foundation at 50 cents per square yard. He deposited his treated stone on the road in a uniform layer about 4 inches thick, rolled it until it was compressed to about 3 inches, applied a light coat of treated coarse screenings, rolled it again and then covered the surface with a skim coat of white sand. As a result we have two thousand square yards of most beautiful pavement, equal to sheet asphalt, which has cost us, including the macadam base, 95 cents per square yard. At present it has all the requirements of a perfect highway, being light in color, free from dust, noiseless and elastic. The inventor claims that it will be entirely free from the effects of climatic conditions, neither hardening in winter nor softening in summer, and that it is entirely waterproof. He also claims that there will be no wear, as the stones do not touch each other, all being bedded in elastic asphaltum, which has been mixed with oil and treated with alkali, thereby making a fixed oil." This is the method of applying asphalt to macadam roads without heating, referred to March 3, page 360.

#### COMBINATION FILLER FOR BRICK PAVEMENTS

JOHN P. ROGERS, City Engineer of Topeka, Kan., reports that he has introduced in that city a new method of filling brick pavements, which will be used this season on some 50,000 square yards of brick paving. This consists of a pitch filler poured into the joint until it is filled to within one-half to three-quarters of an inch of the surface of the pavement. After this pitch has been allowed to cool an asphalt filler is applied, either by pouring or by flooding and squeegeeing, until all joints are filled flush to the surface. The prime object of using this combination filler is to obtain one which is moisture proof and has the other merits of the pitch filler and also presents a top surface which is elastic and does not chip off in cold weather.

Mr. Rogers finds from experiment that the asphalt adheres perfectly to the pitch, and believes that the combination will give an ideal filler at a price less than that of straight asphalt.

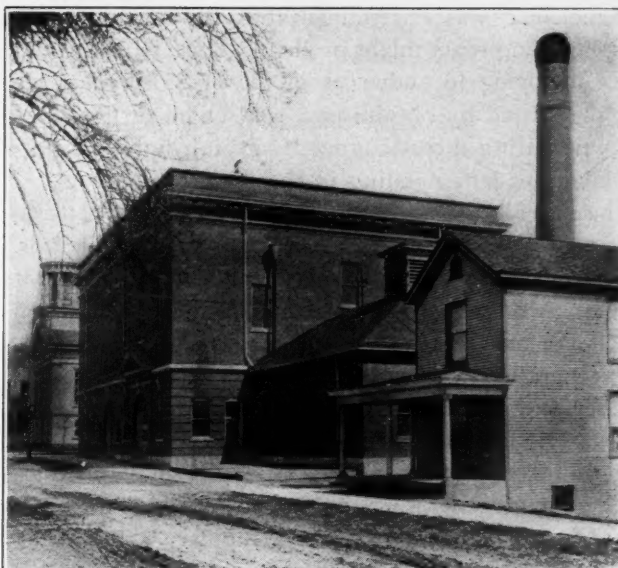


## GEORGETOWN'S CITY BUILDING

One Building Contains Council Chamber, Court Room, Jail, Fire Department, Electric Light Plant and Public Auditorium—Description of Plant

GEORGETOWN, O., a town of 3,000 population, completed last year a city building which is unusual because of the number of purposes to which it is put, there being located in it the Council chamber, Court room, the jail, the Fire Department, the electric light plant and an auditorium or opera house. When this building was first thought of it was the intention to construct only a municipal electric light plant, but as the need for city offices, housing for the fire department and a hall for public entertainments had become more or less pressing it was decided to combine all of these in one building if it could be accomplished. The idea was found practicable by the engineers for the lighting plant, George Hornung & Son, of Cincinnati, and the photographs and plan show the building finally decided upon.

The larger photograph shows on the left the main entrance to the corridor, and on the right the doors to the fire headquarters and to the power room, the former being in the center of the building. The smaller photograph shows the boiler house and stack in the rear of the building. The plan shows that immediately inside the main entrance are stairways leading from the corridor to the entertainment hall which occupies the whole of the second floor. On the main floor, directly inside the entrance, are the court room and council chamber; the jail, containing steel cells, being in the rear of and



CITY BUILDING, SHOWING BOILER HOUSE AND STACK

communicating with the court room. The area of the council chamber is 15 by 27 feet; that of the court room is 27 by 23 feet, and that of the jail 27 by 17 feet. The fire department quarters are 25 by 36 feet; the generating room 48 by 35 feet, and the boiler room  $25\frac{1}{2}$  by 35 feet. The entertainment hall is 65 by 77 feet, the main floor of the auditorium being 65 by 51. A gallery extends across the entire rear of the auditorium, two flights of stairs leading to this. The seating capacity of the auditorium and balcony is about 1,000. Rear stairs and an elevator are provided to furnish access to the stage.



GEORGETOWN CITY BUILDING

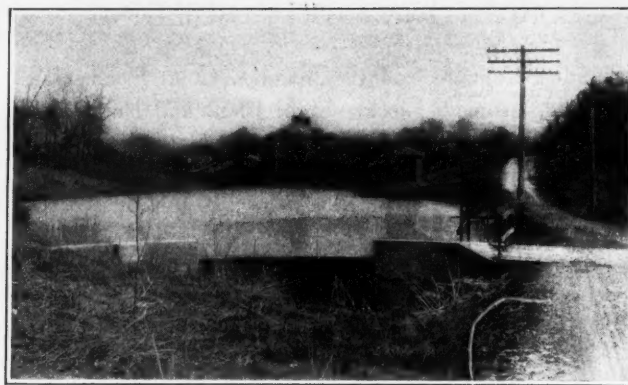


Some fear was entertained that the machinery in the generating room might produce a noise which would prove annoying to audiences in the auditorium. This was prevented by obtaining a well-balanced generating unit with a direct-connected exciter and by using a double deadened ceiling in the generating room.

The generating unit of the electric light plant consists of a 70 kw., 2,300 volt, alternating current generator, direct connected to a non-condensing automatic cut-off engine. A three-panel marble switchboard is used from which the arc and commercial circuits are controlled. The generating room is large enough to permit adding another unit when conditions may require it. The lighting of the town is divided into two circuits, with a total of forty-five  $7\frac{1}{2}$ -ampere series enclosed arc lamps.

The steam generating end of the plant consists of two 66-inch by 16-foot return tubular boilers; two 4x6x6 duplex outside-packed plunger pumps for boiler feed and one 125 hp. shell type feed water heater. Georgetown has no sewerage system and it was therefore necessary to put in a sump or drain well, which was located at the rear of the boiler room and at one side of the brick stack and it receives all drainage from the steam and engine plant. The stack is 48 inches inside diameter and 73 feet high, and is built of radial brick, of the same color as those used in the building which were red pressed brick.

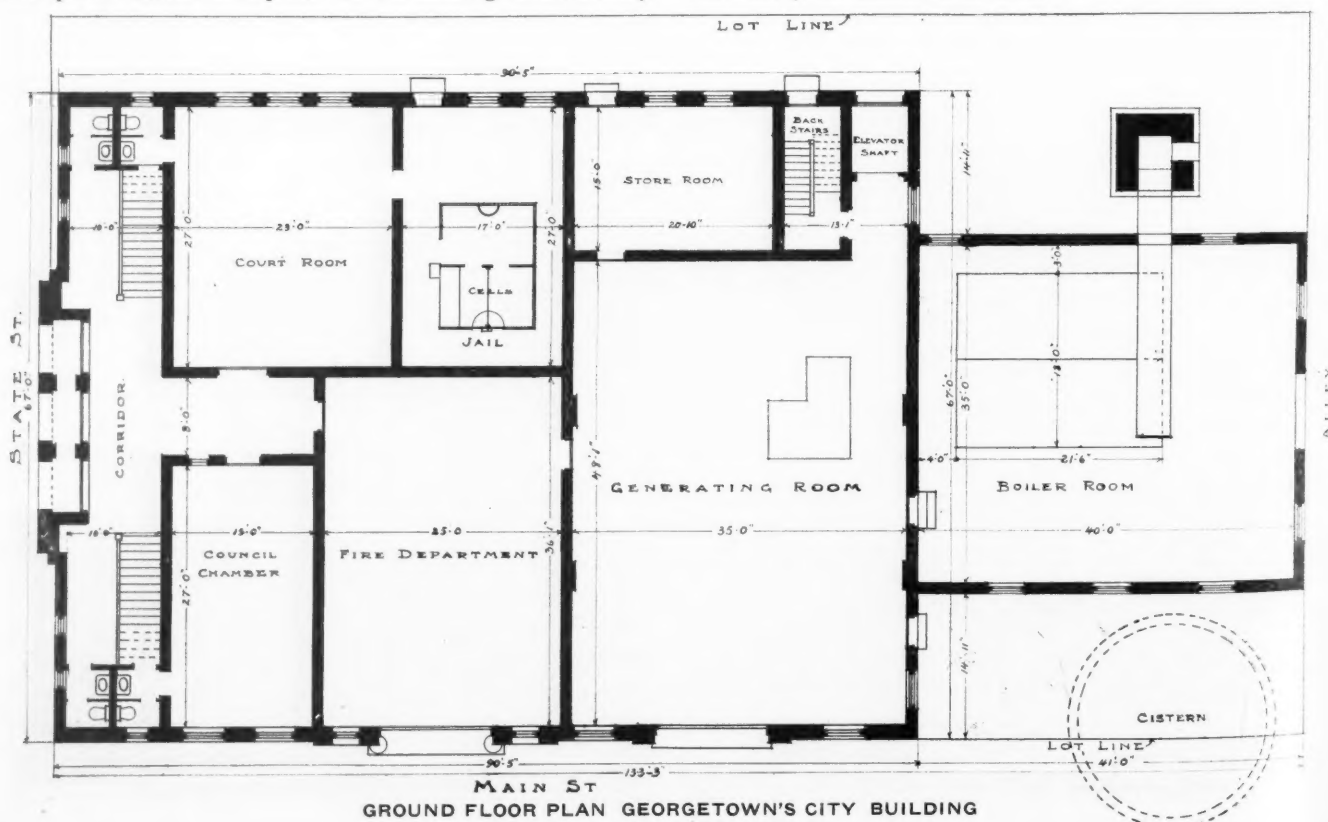
The town has no water works system, its supply being obtained from private wells and cisterns. The investigations of the engineers led them to believe that a sufficient supply of water for the boiler plant could not be obtained from a driven well. They therefore decided to construct a reinforced concrete dam across a ravine approximately one-fourth of a mile west of the plant which is capable of furnishing considerably



GEORGETOWN DAM

more water than is required. At the small reservoir thus created was installed a triplex pump, gear driven by an induction motor, with a capacity of 100 gallons per minute; this being housed in a small brick pumping station. This pump discharges through a four-inch cast-iron main to the receiving well at the generating station, from which the boiler feed pumps draw their supply. This well extends out under the sidewalk, which is carried over the well by reinforced concrete construction. The current for operating this pump is supplied by an independent 2,200 volt primary line from the power house to the pump house, where it is stepped down by a transformer to 220 volts. The pump can be started or stopped from the power house by means of a switch provided for this purpose. The grounds surrounding the reservoir are to be treated as a park and the reservoir used for skating.

The people of Georgetown have taken kindly to commercial lighting and the plant is said to be working to its full capacity and it is proposed to install additional machinery in the near future.



# MUNICIPAL JOURNAL AND ENGINEER

Published Every Wednesday by Swetland Publishing Company  
THIRTY-NINTH STREET BUILDING  
231-241 West Thirty-ninth Street, New York

A. PRESCOTT FOLWELL, Editor  
J. H. DONNELLY, F. E. PUFFER, Assistant Editors  
F. S. SLY, Field Editor

## Business Department

H. M. SWETLAND, President  
J. T. MORRIS, Treasurer M. J. SWETLAND, Secretary  
G. E. SLY, Advertising Manager  
M. C. ROBBINS, Western Manager, 1664 Monadnock Block, Chicago

Telephone, 2046 Bryant, New York

## SUBSCRIPTION RATES

United States and possessions, Mexico, Cuba.....\$3.00 per year  
All other countries..... 4.00 per year  
Entered as second-class matter, January 3, 1906, at the Post Office  
at New York, N. Y., under the Act of Congress of March 3, 1879.

## CHANGE OF ADDRESS

To insure the accuracy of our mailing lists, subscribers are requested to notify us of any change of address, giving both the old and new addresses.

It is further requested that our Subscription Department be notified if copies are not received promptly.

Readers are invited to contribute to the MUNICIPAL JOURNAL AND ENGINEER, either in the form of special articles or of letters discussing matters of current interest.

It is also desired that the facilities furnished by the reference library in this office should be widely known and freely used by those interested in municipal affairs. Visitors will be welcomed and provided with conveniences for search, and inquiries by mail will be promptly dealt with.

APRIL 21, 1909.

## CONTENTS

Street Cleaning in New York (Illustrated).....	663
Asphalting Roads in New Jersey.....	668
Combination Filler for Brick Pavement.....	668
Georgetown's City Building (Illustrated).....	669
Typhoid in Washington.....	671
Government per Ton-mile.....	671
Municipal Publicity Periodicals.....	671
Arbitrating Lighting Rates.....	672
New York State Health Department.....	673
Fire Alarm Box and Pedestal (Illustrated).....	673
Municipal Bond Sales During March.....	674
News of the Municipalities (Illustrated).....	675
Legal News—A Summary and Notes of Recent Decisions.....	682
News of the Societies.....	683
The Week's Contract News.....	684
Patent Claims.....	701
Incorporations.....	702
Municipal Appliances (Illustrated).....	702
Trade Notes.....	703
Personals.....	704

## Typhoid in Washington

TYPHOID fever is again on the increase in Washington, D. C. A year or so ago when it was found that, in spite of the installation of a new water filtration system, the typhoid conditions of Washington were not improved, this journal, in common with others who believed that the officials of that city were doing their best and would quickly remedy these conditions, refrained from criticising any department or officials, confident that the recurring typhoid epidemics were due to some cause other than the water supply, and that this would soon be found and remedied. We have watched with interest the rises and falls in the typhoid rate during the past

year, hoping that each rise would be the last and that the sources of these epidemics would be discovered and removed.

We do not believe that the sanitarians of this twentieth century are willing to admit that they cannot discover the source of and prevent epidemics of this disease, if they be given sufficient encouragement and facilities for investigation and power to act. It appears to us, therefore, as a national disgrace that the Health Department is obliged to state in its report for the week ending April 10 that typhoid fever is continuing to increase, there being at that time 200 cases under treatment, as against only 66 cases a year previous. If the Health Department of the District will not or cannot adopt the necessary measures for obtaining control over this disease in the Capital of the United States, it would seem desirable for the credit of the country that the matter be taken in hand by some competent association of sanitarians, such as the American Public Health Association.

## Government Per Ton-Mile

ONE of those happy phrases occasionally coined which are so pat as to meet with general adoption was uttered by Mr. Harriman a few days ago, when he referred to government on a "ton-mile" basis. There is a volume of truth in the few words by which the expression was explained:

The railroad managements know what it costs them to transport a ton of freight one mile, and are governed accordingly; and, furthermore, they are constantly striving to reduce that unit of force. If this principle were to be applied to the financial problems of the government you would see a marvelous change within a few years.

The establishing of such units of measure for municipal work and gauging efficiency by them is one of the main purposes of the general adoption of uniform accounting systems.

## Municipal Publicity Periodicals

WE have, within the past few months, been pleased to comment favorably upon the publications issued by the city governments of San Francisco and Denver, and are pleased to note that several other cities are following their good example in placing before the citizens official records giving in detail a statement of what the city is doing, the letting and progress of contracts, and other information to which the citizen is entitled and which will inform him how the money which he contributes as taxes is spent. The editors of these publications realize that a mere collection of figures would not serve their purpose, but would bury the truth rather than expound it. The very fact that they go to considerable pains to present synopses, to tabulate figures and to assist the readers in every way in understanding the importance of the data given, and also to attract them to the perusal of the same by illustrations and more general descriptive matter, is evidence of the honesty of their purpose to inform the citizens concerning the affairs of the several departments.

An illustration of one of these points is given by the



April 8th issue of the San Francisco *Municipal Record*, in which is contained all of the official documents and correspondence relative to the appeal to Congress for permission to use the Hetch Hetchy water supply and its consent thereto. This makes more than four pages of fine print, which the average reader would not care to wade through. The editor of the *Record*, however, has classified the correspondence and documents according to the matter treated, and placed at the head of each, in black-faced type, a brief synopsis of the same. For example, the material contained in one of these pages is synopsised in eleven lines, as follows: "The Secretary of Interior directs General Land Office to accept tentative map and field notes." "Secretary of Agriculture is instructed that compensation is not to be exacted from city for rights of way over park lands," and "Department of Agriculture issues special use permit for use of National forest lands for reservoirs, conduits and power plants."

One of the first cities to publish for general distribution a complete record of its official doings was the city of New York, which is now publishing volume 37 of the *City Record*. (Total number, 11,000.) Although the *Record* has been published for a sufficient length of time, one would think, to have developed the most effective system, it is put together with absolutely no system. The Congressional Record is the lightest kind of literature in comparison with it. In the New York *City Record* probably all the figures and data in connection with the various departments are given, and the result is chaos. The general appearance of the paper gives the impression that all documents sent from the several departments are set up and inserted in the order received, with no titles or any other symbols to indicate a division between matters treated of; so that one reading a document concerning the Water Department, for instance, may suddenly find himself in the midst of another dealing with paving without being conscious of the fact until some definite statement informs him thereof. There is never the least attempt at illustrating, not even by a map, showing the location of streets or sewers, for instance. The *Record* contains a great deal of valuable matter, and it is an outrage that the enormous sum which its publication costs should not result in giving due prominence to the same. But as each daily issue contains 50 to 400 or 500 pages, and as there are no indexes worthy of serious consideration, the finding of such valuable information is like the proverbial hunting for a needle in a haystack; and in these busy days one would not take the time for this even were the needle of gold. We believe that one of the several citizens' associations of the city could perform no greater service in the way of enlightening the public as to how the business of the city is conducted, and of arousing interest in it, than by the publication of a weekly similar to that of San Francisco or Denver, which would give the essential facts concerning the more important matters, would present in abstract or tabulate the more valuable data, and also describe in popular language some of the most generally interesting and most excellent work which is being carried on by the departments.

## ARBITRATING LIGHTING RATES

ARBITRATION between a city and a public service corporation has been concluded at Temple, Tex., in a manner which seems to be satisfactory to both parties; a noteworthy fact in connection therewith being that the two arbitrators appointed by each party did not find it necessary to submit a single detail under contention to the umpire which was agreed upon for rendering a decision in such cases.

The company had previously made a proposition for lighting the town at \$3,240. After some discussion it was agreed to appoint arbitrators to decide what would be a fair price for the company to charge for the proposed service, namely, 15 arc lights and 80 tungsten lights. The arbitrators, W. H. Wiggins, of Waco, and R. B. Stitchler, of Dallas, reported that a fair price for this service would be \$3,750.30, about \$500 more than the company's original proposition. This addition was principally due to the desire of the city to extend the lighting over a larger area, requiring 22 miles of new wires and poles as against 10 miles originally contemplated; and because the lighting company had omitted from its calculations, by oversight, the cost of the water required in the steam plant, which the arbitrators estimate would cost 0.1876 cents per kw.h. Other items of cost of current were given as 1.7698 cents for fuel and 0.183 cents as *pro rata* cost of insurance, oil, waste, packing, etc. (The company is already engaged in furnishing commercial lighting.) The remaining items of cost for furnishing the number of lights stated were as follows:

Inspection, 1/2 of \$900.....	\$450.00
Electrodes at \$1.70.....	25.00
Outer globes at 50 cents.....	7.50
Rectifier renewals.....	3.75
Incandescent renewals (1,000 hours).....	292.00
Eight per cent on \$10,402.72 investment for street lighting.....	832.22
Maintenance of lighting equipment.....	824.85
One and three-quarter per cent on \$7,500 as taxes on new installation.....	131.25
55,588 kw.h at 2.14 cents.....	1,189.58
	<hr/> \$3,757.30

The equipment going to make up the cost of \$10,402.72, which was to install 15 310-watt luminous arc lamps and 80 60-c.p. series tungsten incandescent lamps, was as follows:

Arc and incandescent light equipment, rectifier, etc....	\$1,979.76
Installation of rectifiers in station.....	52.00
Installing arc and incandescent lamps.....	347.70
New poles and provisions for old ones necessary for street circuits.....	2,099.84
Wires, insulators, hardware and labor.....	5,152.95
Incidentals and contingent expenses.....	770.57

The cost of generating electricity was based on a 24-hour test made in the power house of the company. The amount of current required was based on the assumption of an all-night and every-night schedule. In spite of the fact that this sum is higher than the original bid of the company, it appears from the above that no allowance is made for additions to the power plant (none being required at present) or for any percentage of the cost of the plant. It would appear, therefore, that even this increased price was very favorable to the city.



### NEW YORK STATE HEALTH DEPARTMENT

THE Annual Report of the New York State Department of Health for 1908 contains a synopsis of the work done during that year, which indicates the great activity of the Board and the most important part which it is taking in guarding the welfare of the people. The various heads under which this work is classified are those of Tuberculosis Prevention; Investigations of Oysters and other Shell Fish; Investigation of Stream Pollution; Research Work in Sanitary Science, especially with reference to pasteurization, prevention of hydrophobia and of ophthalmia; Protection of Public Water Supplies; Investigation of Water Purification Plants, 75 of the 130 in the State having been selected for investigation and 23 of these having already been reported upon; Issuing Permits for Sewerage and Sewage Disposal Plants, 40 having been issued during the year, and advice having been given to 34 cities; Investigation concerning Stream Pollution at 97 places; together with several special investigations ordered by the Governor. A number of minor investigations were made, such as that of the water supply on steam boats, of ice cut from the Mohawk and Hudson rivers, the distribution of antitoxins, and general supervision has been had of epidemics of smallpox, typhoid and scarlet fevers, diphtheria, measles, etc.

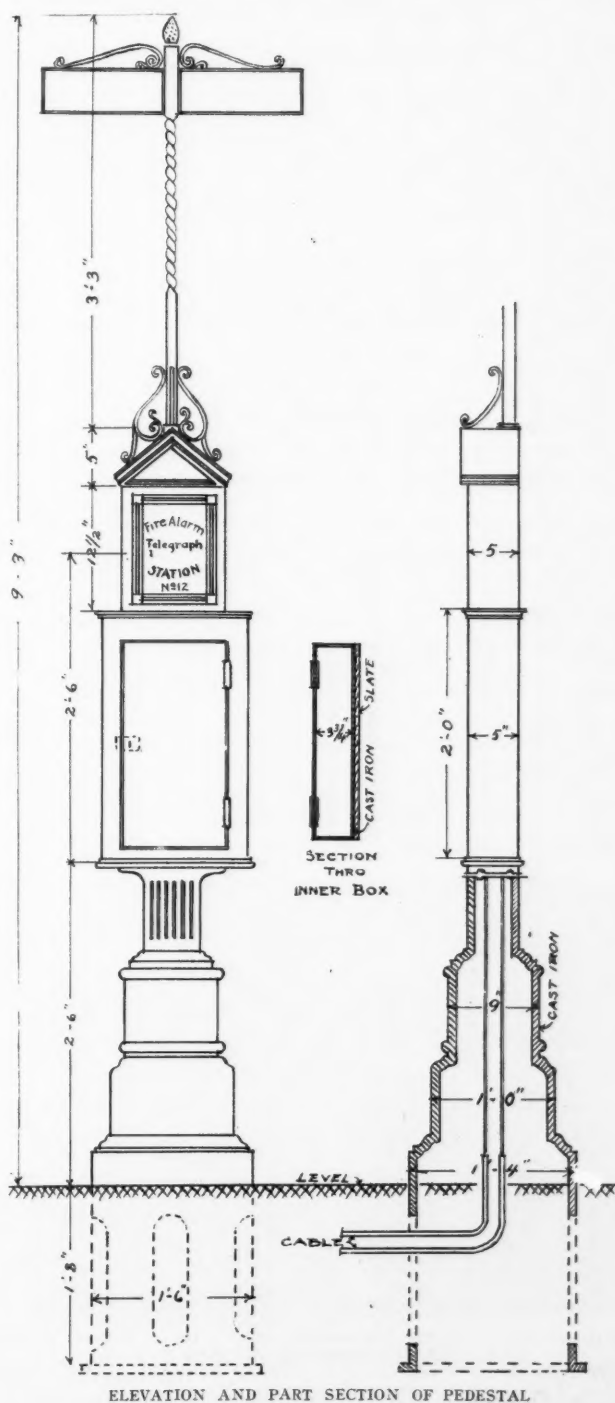
The Department publishes a monthly Bulletin, from which we have had occasion to quote once or twice during the past year. A division of Vital Statistics collects such data from the various cities of the State. It is with justifiable pride that Commissioner Eugene H. Porter announces the fact that the annual death rate for the year was 16.2, as compared with 17.5 for 1907 and 17.2 for the past five years; the reduction in Greater New York having been especially notable, having fallen from 18.5 to 16.8, or but little greater than the average for the entire State. The death rate from typhoid fever was the lowest ever recorded in the State, being only 16 per 100,000, while in 1907 it was 19.8.

### FIRE ALARM BOX AND PEDESTAL

FIRE CHIEF John P. Quigley, of Syracuse, N. Y., has designed a post for carrying fire and police alarm boxes which has been adopted by that city; a contract has been let to Smith & Caffrey, of Syracuse, for thirty-four fire and nine police alarm boxes, the contract price for this number being \$1,500. The illustration shows that the pedestal is apparently very substantial and that no ill-conceived attempts at ornamentation have been made. An iron rod carrying street signs is added to the post on street corners wherever it seems desirable. Chief Quigley writes that what he claims especially for this pedestal is that the terminal joints are in such a position that the lineman or repairer can readily get at the connections, the terminal plate being but breast high to an ordinary man. The whole pedestal, including the street sign, is 9 feet 3 inches high. The twisted rod carrying the street sign is supposed to be made of bronze and fastened to the top of the fire alarm box. If desired, a gas pipe can be placed in the same

way and carry a gas lamp, or an electric light could be carried on the top of the post.

In using this post, the idea is to feed the cable from the manhole into the post to the terminal plate, and out again with the same sized cable which is continued to the next post. This does away with making sleeve joints in the manholes, which are always more or less trouble. The posts are supposed to set eighteen inches into a concrete foundation so as to stand perfectly solid. The terminal box is, as shown in the section, made of cast-iron with a slate back, in which back the pins will be so arranged that any connection can be made on this plate in various circuits; one circuit, of course, taking care of the box immediately above. The weight of the pedestal without the street sign fixture will be about 250 pounds, and the street sign extension will weigh 40 or 50 pounds more.



# MUNICIPAL BOND SALES DURING MARCH

NAME OF CITY	Estimated Population	ACTUAL VALUE OF ASSESSABLE PROPERTY (estimated)		Ratio of Ass'd to Act'l Value	Bonded Debt	Sinking Fund	NET BONDED DEBT		Tax Rate Per \$1,000 Ass'd Value	BOND SALES, MARCH, 1909				Basis
		Total	Per Capita				Total	Per Capita		Term of Years	Amount	Interest	Price	
Mobile, Ala.	65,000	\$26,486,202	\$407	25%	\$3,777,500	\$65,650	\$3,711,850	\$57.00	\$6.00	1-10 ser.	\$320,000	5% s.a.	100.109	4.975
Montgomery, Ala.	63,000	20,826,743	330	50%					11.25	30	200,000	5% s.a.	101.05	4.932
Tuscaloosa, Ala.	7,140	7,319,943	1,025	33%	138,800		138,800	19.00	5.00	30	75,000	5% s.a.	Par	
Lake Village, Ark.	2,000	344,368	172	50%	None				2.50	20	25,000	6% a.	102.20	5.811
Mountain View, Cal.										1-40 ser.	50,000	4 1/2% s.a.	101.05	4.421
Pasadena, Cal.	30,000	70,000,000	233	50%	551,800		551,800	18.00	12.00	1-40 ser.	150,000	4% s.a.	Par	
Willows, Cal.	1,000	1,000,000	1,000	60%	30,000		30,000	30.00	7.50	1-30 ser.	30,000	5% s.a.	107.903	4.296
E. Hartford, Conn.										20-40 op.	88,000	4% s.a.	100.761	3.944
Norwalk, Conn.										30	225,000	4% s.a.	101.00	3.943
Stamford, Conn.	25,000	20,000,000	800	1%	270,000	68,028	201,972	8.08	6.29	30	225,000	4% s.a.	103.51	3.802
										25	30,000	4% s.a.	103.63	3.774
										28	35,000	4% s.a.	95.00	4.309
Americus, Ga.											10,000	6% s.a.	108.83	
Thomaston, Ga.	2,000	1,500,000	750	60%	22,000	1,000	21,000	10.50	8.50	5 1/2 av.	6,500	4% a.	Par	
Cerro Gordo, Ill.										7 1/2 av.	12,000	4 1/2% s.a.	103.75	3.90
Decatur, Ind.										4 av.	50,000	5% s.a.	104.00	3.91
Frankfort, Ind.	12,000	13,805,915	1,150	33 1/3%	31,000		31,000	2.60	28.50	4-10 ser.	4,000	5% s.a.	100.25	4.945
Grand View, Ind.										10	12,000	5% s.a.	Par	
Mt. Vernon, Ind.										1-3 ser.	1,500	5% s.a.	101.066	4.439
Rockport, Ind.											25,000	4 1/2% s.a.	103.48	
Union City, Ind.	5,000	1,500,000	300	50%	28,500		28,500	5.70	12.50	10-20 op.	17,000	5% s.a.	102.941	4.629
Earlham, Ia.	1,000	429,000	429	25%	2,500		2,500	2.50	18.00	1-10 op.	3,500	6% s.a.	101.685	4.261
Eddyville, Ia.											7,000	6% s.a.	106.305	
Hospers, Ia.										20	25,000	5% s.a.	104.30	4.667
Lamoni, Ia.										1-10 ser.	17,127	5% s.a.	Par	
Pratt, Kan.											20,000	5% s.a.		
Franklin, Ky.	3,500	2,500,000	714	50%	30,000	1,100	38,900	11.00	7.50	40	25,000	4 1/2% s.a.	107.50	4.116
Lexington, Ky.	45,000	30,000,000	666	74%	982,461		982,461	21.00	17.00	16 1/2 av.	30,000	4 1/2% s.a.	101.00	3.917
Maysville, Ky.										10	15,000	3 1/2% s.a.	100.91	3.28
Beverly, Mass.	18,000	29,576,175	643		1,966,250	712,458	1,253,792	69.00	17.40	4-5-6 av.	26,000	3 1/2% s.a.	100.91	3.28
Lynn, Mass.										10	45,500	3 1/2% s.a.	101.59	3.511
										30	30,000	3 1/2% s.a.	104.55	3.261
Melrose, Mass.										20	78,000	3 1/2% s.a.	104.17	3.214
Flint, Mich.	16,000									25	130,000	4% s.a.	100.461	3.971
Kalamazoo, Mich.	40,000				684,092	105,160	578,932	14.00		1-10 ser.	97,000	4% s.a.	100.176	3.964
Traverse City, Mich.										20	35,000	4 1/2% s.a.	102.141	4.091
Ortonville, Minn.										10-20 op.	30,000	5% s.a.	102.316	4.706
Waconia, Minn.	1,000	116,000	116		11,500		11,500	11.00		3-11 ser.	9,000	4 1/2% a.	Par	
Wesson, Miss.										10	8,000	5% s.a.	100.012	4.998
Carthage, Mo.										11-20 op.	220,000	5% s.a.	100.068	4.492
Columbia, Mo.										11 1/2-20 op.	97,500	4% s.a.	Par	
Hannibal, Mo.										5-20 op.	75,000	4% s.a.	Par	
Cambridge, Neb.											25,000	5% s.a.	101.403	3.707
Lincoln, Neb.	55,000	35,250,000	641	20%	1,224,100		1,224,100	22.66	39.25	1-10 ser.	19,660	5% s.a.	102.177	3.349
Manchester, N. H.	70,000	37,746,708	539	70%	1,655,000	648,047	1,006,953	14.00	18.60	20	50,000	4 1/2% s.a.	101.01	3.91
Bridgeton, N. J.	13,913	10,031,893	721	66 2/3%	261,200	73,276	187,924	13.00	19.30	15-30 op.	35,000	4 1/2% s.a.	Par	
West Orange, N. J.	10,000	8,000,000	800	60%	692,500	40,000	652,500	65.00	2.26	30	100,000	4% s.a.	Par	
W. New York, N. J.										15	50,000	5% s.a.	Par	
Frankfort, N. Y.										1-18 ser.	18,000	5% s.a.	Par	
Johnstown, N. Y.										2 1/2 av.	25,000	5% s.a.	101.51	4.28
Moers, N. Y.										5 1/2 av.	7,000	5% s.a.	102.21	4.54
Mt. Vernon, N. Y.	30,000	35,560,000	1,185	80%	2,278,300	613	2,277,687	75.92	20.70	3	60,000	4 1/2% s.a.	100.93	4.167
Troy, N. Y.	76,000	34,250,172	714	100%	3,541,679	85,779	3,455,900	45.47	17.66	3	40,000	4 1/2% s.a.	100.937	4.165
Yonkers, N. Y.	68,000	60,019,750	883		5,018,682	299,600	4,719,082	69.40	24.48	5 1/2 mos.	100,000	4 1/2% s.a.	100.004	
										1-20 ser.	11,800	4 1/2% s.a.	100.99	3.883
										1-18 ser.	18,000	4 1/2% s.a.	100.57	3.927
										1-10 ser.	50,000	4 1/2% s.a.	100.20	3.959
Canton, N. C.										10-20 op.	65,000	5% s.a.	Par	
Charlotte, N. C.										30	100,000	4 1/2% s.a.	104.522	4.232
Salisbury, N. C.										15	50,000	5% s.a.	108.021	4.577
Alliance, O.	15,000	12,467,370	831	33 1/3%	578,190		578,190	38.54	30.20	20	9,500	4 1/2% s.a.	108.547	3.881
Bettsville, O.										8	1,200	5% s.a.	102.337	4.163
Byesville, O.										14 1/2 av.	5,000	5% s.a.	109.56	4.117
Cardington, O.											5,000	5% s.a.	105.00	
Cheviot, O.										1-10 ser.	11,235	5% s.a.	104.089	4.16
Delaware, O.	11,000	7,000,000	636	56%	214,584	14,365	200,219	18.20	31.70	5 1/2 av.	31,727	5% s.a.	104.965	3.94
Elmore, O.	1,200	1,072,000	893	25%	21,000		21,000	17.00	12.00	10	1,400	5% a.	106.071	4.242
										1-10 ser.	7,661	4 1/2% s.a.	102.38	4.014
Hamilton, O.	30,000	22,000,000	733	50%	1,064,505	54,684	1,009,821	33.66		1-5 ser.	1,162	4 1/2% s.a.	103.18	3.375
										10	15,000	4 1/2% s.a.	101.65	3.80
Haviland, O.										4	350	5% s.a.	103.028	5.153
Lakewood, O.	10,000	12,000,000	1,200	37%	1,073,044	100,504	972,900	97.29	35.95	1-18 ser.	18,000	5% s.a.	107.34	4.06
Leipsic, O.										5 1/2 av.	14,959	5% s.a.	103.715	4.201
Lockland, O.										10	2,900	4 1/2% a.	105.60	3.817
Marysville, O.											29,000	5% s.a.	100.51	
Minster, O.	1,800	550,000	305	50%	8,000		8,000	4.00	4.80	3 1/2 av.	2,500	5% s.a.	103.533	4.101
Newark, O.										1-10 ser.	4,000	5% s.a.	104.857	4.006
Orrville, O.	35,000	950,000	27		43,000		43,000	1.20	10.50	5 1/2 av.	3,335	5% s.a.	104.45	3.957
Portsmouth, O.	26,000	16,000,000	615	59%	859,000	54,000	865,000	30.00	34.00	10	9,000	4 1/2% s.a.	108.133	3.997
Proctorville, O.										2 av.	700	4% s.a.	100.71	3.63
Ravenna, O.	5,000	7,000,000	636	40%	200,802	15,342	185,460	37.00	28.80	5-20 op.	5,000	5% s.a.	Par	
Salem, O.	11,000	7,000,000	636	40%	318,000		318,000	28.00	35.60	1 1/2-29 ser.	16,000	4 1/2% s.a.	102.718	3.866
										14 1/2 av.	15,000	4 1/2% s.a.	105.444	4.005
										20 5-6 av.	9,500	4 1/2% s.a.	101.701	3.88
Sandusky, O.	23,000	14,000,000	608	50%	640,000	10,000	630,000	27.39	16.92	7	45,000	4% s.a.	100.862	3.858
										2 av.	1,500	4% s.a.	100.329	3.826
										2 av.	2,900	4% s.a.	100.335	3.823
										16 1/2	1,200	4% s.a.		
										19 1/2	1,000	4% s.a.		
										19 1/2	500	5% a.		
										19 1/2	1,750	5% a.	108.288	3.855
										20	8,500	5% a.		
										19	1,200	5% a.		
										1-10 ser.	3,003	5% a.		
Youngstown, O.	60,483	56,882,000	940	50%	1,269,112	209,167	1,059,945	17.25	29.42	8 av.	50,000	4% s.a.	101.334	3.805
Capitol Hill, Okla.										25	50,000	5% s.a.	104.00	5.703
Elk City, Okla.											35,000	5% s.a.	102.00	
Erick, Okla.										25	27,500	6% s.a.	103.273	5.757
McAlester, Okla.	12,500	8,000,000	640	62%	628,000	25,000	603,000	48.00	13.66	20	203,000	5% s.a.	105.27	5.504
Roseburg, Ore.										30	35,000	5% s.a.	108.26	3.788
Bethlehem, Pa.	16,000	6,468,285	404	65%	269,800	9,298	260,502	16.00	7.00	15-30 op.	15,000	4 1/2% s.a.	102.397	3.788</



## NEWS OF THE MUNICIPALITIES

Current Subjects of General Interest Under Consideration by City Councils and Department Heads—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

## ROADS AND PAVEMENTS

## Financiers to Fight for Wood Paving

Boston, Mass.—Property owners, trustees of estates, tenants and business men generally on State street, more than 30 in number, called upon Superintendent of Streets Guy C. Emerson recently to contest to the limit the efforts being made to prevent the repaving of State and Exchange streets and Merchants' Row with wooden block pavements to replace the granite blocks. Those interests want Superintendent of Streets Emerson to fight the Chamber of Commerce interests who have applied to the Supreme Court for an injunction to restrain the Street Department from repaving with wood blocks. The State street brokers and business men hold that the present granite block pavements are a nuisance and many declare that unless the wood block pavements are substituted they will petition the city for an abatement of their taxes.

## Paving Town Streets with Wheat Straw

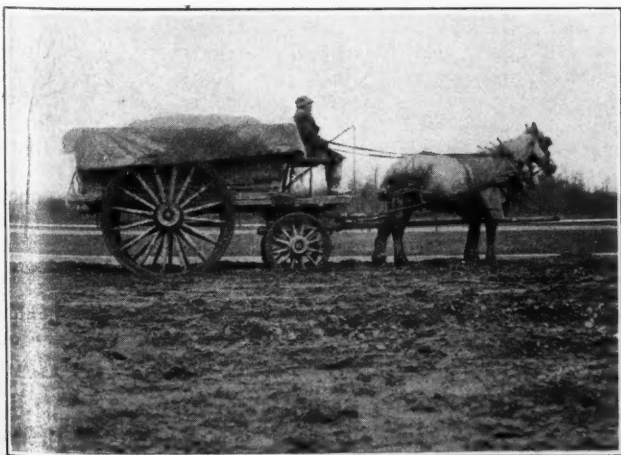
Endicott, Wash.—Paving town streets with wheat straw as a means of binding the mud in the spring and keeping the dust down later in the season is being demonstrated in Endicott, where two miles of streets were treated this spring, a foot of fresh straw being laid from curb to curb and packed into the wet ground following a slight rainfall. The experiment is considered to be a success, as the streets are neat and clean and there is no dust, though traffic to and from the big wheat ranches is heavy. Country roads in other parts of Washington have been "strawed" for years during the summer months to hold the dust, but this is the first time it has been tried in a town, and it is not unlikely that other communities will take up the work until permanent pavements are built.

## Paving Plant Not for Sale

Fort Worth, Tex.—At a meeting of the Board, Commissioner Sam Davidson received offers for the purchase of the city's rock asphalt paving plant, but the City Commissioners voted not to sell, holding that the plant proved an effective club to keep down paving prices.

## Ash Wagons Too Much for Boulevard

Philadelphia, Pa.—The accompanying illustrations show the results of hauling 300 loads of ashes a day over the Torresdale Boulevard, recently completed and opened from Broad street northeast. Complaints of poor work were made during the construction of the driveway. The illustration shows the middle road of three macadamized driveways separated by stretches of tree-planted grass plots. A concrete footwalk on each side, with grass plot borders, completes the 300-foot-wide parkway.



SAMPLE OF PHILADELPHIA ASH WAGON,  
Courtesy of the Philadelphia Record.

## Chicago Paving for 1909

Chicago, Ill.—Figures have been given out and statements are made by the Board of Local Improvements that all the contracts for paving in Chicago have been let for the year. The figures show only 38.05 miles, against 79.09 miles paved last year. The total cost this year will be \$1,373,226, less than half of the 1908 appropriations. The figures made public by the Board of Local Improvements show 232,670 square yards of asphalt, against 653,224 last year; 67,540 brick pavement, against 153,206 last year; 21,460 creosote blocks, against 87,167 last year; 117,741 granite pavement, against 98,795 last year, and 168,350 macadam, against 325,930 last year. Prices remain about the same, being \$2 a square yard for asphalt, \$2.35 for brick, \$3.55 for creosote, \$4 for granite and \$1.20 for macadam.

## Street Paving Combine in Dayton

Dayton, O.—That four men in Dayton control the output and sale of all paving brick in this vicinity is information that has come in a roundabout way to the Board of Public Service. The information seems to have been handed right off the platter, and is to the effect that unless the four men named bid on the street jobs and secure them, any other contractor is out in the cold unless it is provided otherwise that the four brick contractors share in the contract with the low bidder.

## Indiana Paving Law Ambiguous

Indianapolis, Ind.—The City Attorneys of South Bend, Fort Wayne, Goshen and several other cities of the State have been in Indianapolis to confer with Corporation Counsel Matson about the new Thornton paving law. He told them that it was his opinion that the new law means that every step taken hereafter in making street improvements must be taken under the new law, and that this applies to all improvements now under way as well as to all that are contracted for hereafter. This, of course, makes a bad mix-up in street improvements, for neither a city nor a contractor can tell just what effect this change is going to have on the cost of the work. Therefore, in this city, many contracts have been given up by the contractors rather than take the chance of losing through the changes that would be made necessary by the new law. The city has given the contractors the option of going ahead with the work or throwing up their contracts, and some of them have taken the latter course. A suit is to be filed in the courts here to get a judicial decision on the law. It will be a friendly suit in which a contractor will seek an injunction against the carrying out of the provisions of the law. When this suit gets all the way through the courts then the officials of the cities will know where they stand, but not before.



AND WHAT THEY DID TO NEW BOULEVARD



## SEWERAGE AND SANITATION

### Sewer Plans Made in Great Detail

Syracuse, N. Y.—Plans and specifications have been approved by the Syracuse Intercepting Sewer Board for one of the greatest engineering enterprises Syracuse has ever undertaken. Tenders have already been asked for one section of the work and the maps and data available to bidders have been prepared with extraordinary care. The making of the surveys and compilation of the data have been made by Chief Engineer Glen D. Holmes. The location of underground structures for the entire two and one-third miles of the sewer, which passes through the heart of the city, is shown, as well as all structures on the surface of the streets to be passed through. The maps show in detail the location of every subway, sewer, water and gas main, all steam pipes, telephone, telegraph, electric lighting and fire and police alarm telegraph conduits below grade as well, as every hydrant, catchbasin, manhole, water gate, pole, street car track, track inlets, curbs, sidewalks, the pavements and kind of materials composed of and even every tree along the route. Of these various objects there are dozens at every street corner, amounting to thousands between the two terminals. Moreover, 200 borings have been made along the route and samples are on file.

### No Fumigation After Measles

Indianapolis, Ind.—The City Board of Health has decided to abandon the plan of fumigating houses following cases of measles in the future. In addition to believing that fumigation is needless, the Board expects to make a considerable saving in the time of the inspectors who have conducted this work and make a saving in the cost of the disinfectants employed. "We have made inquiries in the principal cities of the country," said Dr. E. B. Mumford, chief inspector of infectious and contagious diseases, "and have found that many cities do not fumigate after measles. Trenton, N. J.; Rochester, N. Y.; Washington, D. C.; Pittsburg, Pa.; Baltimore, Md., and Detroit, Mich., are among the cities in this class." Dr. Mumford said that the danger of contagion was during the first few days of the appearance of the disease, and after two weeks' quarantine there is little danger.

### Replacing Brick Sewer Built Forty Years Ago

Louisville, Ky.—City Engineer John Chambers is having the sewer in Sixth street, from Market to Jefferson, reconstructed. The sewer is now being replaced with pipe and will be 30 inches in diameter, and Engineer Chambers says it will last for a century. The mortar between the bricks in the old sewer had crumbled away, and there was danger of a general letting-down of the sewer.

### Nashville Passes Meat Inspection Ordinance

Nashville, Tenn.—A meat inspection ordinance has been passed which gives the Board of Health power to name one inspector and two taggers, whose duty it is to inspect all animals slaughtered within two miles of the city limits, and the right to condemn such as the inspector sees fit. The ordinance provides that those having the animals slaughtered shall pay 10 cents per head for cattle and 2 cents per head for sheep, lambs, hogs and calves.

### Leaks Found in Wood Stave Pipes

Salt Lake City, Utah.—The leaks found in the wood stave outlet pipe gave rise to some passages between City Engineer L. C. Kelsey and some of the members of the Board of Public Works. The chairman and C. D. Rooklidge manifested a disposition to say "I told you so" to Kelsey, because their suggestions long ago, that the pipe ought to be reinforced where it goes under the tracks, were not listened to by him. Kelsey, for his part, maintained that the leaks were worse in other parts than under the tracks, and that the tracks had little to do with the break. It was decided to let Mayor Bransford and Chairman McMillan take action.

### Tackling Mosquito Problem in Jersey

Verona, N. J.—The Board of Health has decided to make war upon the mosquito. It is asking the cooperation of the citizens of the borough in an attempt to exterminate by means of fumigation that particular species of the pest known as the house mosquito, which is supposed to breed largely in cellars.

## SPITTERS TO BE ARRESTED

### Two Cities Take Drastic Action to Stop Nuisance—Violators Fined in National Capital—Virginia Town Alert

Washington, D. C.—The police are expected to make arrests for violation of the law against expectorating on the sidewalks, in public buildings and street cars. Major Richard Sylvester has directed enforcement of the law. Early in the week the Superintendent of Police sent the order to the captains of the several precincts. In most of the precincts the policemen were advised to warn violators of the law that arrests would be made. In the Seventh Precinct five arrests were made. Four of the five arrested were permitted to leave \$1 collateral each to appear in the Police Court. They failed to appear, however, and their collaterals were forfeited. The fifth defendant was assessed \$2, with the alternative of six days' imprisonment. He did not have the money and was committed. Major Sylvester thinks it about time that people were obeying the provisions of the law. He considers the imposition of fines the most effective way of teaching the law.

Suffolk, Va.—One result of the local fight against the white plague will be a more rigid enforcement of the anti-spitting ordinance. This law has been on the books for years, but so far as can be recalled there has never been a conviction or prosecution. The statute, though, has partly accomplished its purpose, for most people obey its provisions. Mayor Norfleet has instructed the police force to sound a warning that the laws along this line must be observed. There must be no more expectoration on sidewalks or in public buildings or conveyances. A fine of not more than \$5 is provided for each offense.

## WATER SUPPLY

### Company Prepares to Sell Artesian Water Out of State

Belleville, N. J.—The Hudson County Water Company is engaged in drilling wells, presumably with a view of supplying water to Staten Island. Five years ago the project of supplying Staten Island with water was conceived by Borough President George F. Cromwell, who obtained an appropriation for laying the mains. The plan was defeated by a New Jersey statute forbidding the diversion of water from the State. The law was sustained by the courts so far as surface water was concerned, but was held not to apply to artesian water.

### To Meter Water and Cut Rates

Bayonne, N. J.—At a meeting of the Council an ordinance drawn at the suggestion of Mayor Pierre Garven, and which will result in a big saving to private consumers of water as well as those who use large quantities, was passed. There will be a general reduction in the cost of water beginning July 1. The rates are: For front and rear buildings, for domestic use, on main lines and private lines, \$1.50 per 1,000 cubic feet. Water used for manufacturing and commercial purposes shall be charged at the following rates: In quantities less than 100,000 cubic feet per month, \$1.30 per 1,000 cubic feet; quantities exceeding 100,000 cubic feet and less than 500,000 cubic feet, per month, \$1.20 per 1,000 cubic feet; quantities exceeding 500,000 cubic feet and less than 1,000,000 cubic feet, per month, \$1.05 per 1,000 cubic feet; quantities exceeding 1,000,000 cubic feet, per month, 95 cents per 1,000 cubic feet. Public buildings, libraries, hospitals, places of religious worship and all institutions attached thereto, 95 cents per 1,000 cubic feet. All water furnished by the city shall be measured by such meters as the Mayor and Council shall from time to time purchase or adopt.

### Buys Coal Cheap Under Heat Unit System

Lowell, Mass.—The Water Board and the Purchasing Agent are to be congratulated because of the low price on coal, the price being the lowest in the history of the Water Department, and will show a saving of about 40 cents a ton over last year. When the Water Board made requisition for coal it did so under the "heat unit system," and that is why the price will be less this year than ever before. Under this system the dealer establishes his own standard and he must live up to it or pay the penalty.

**CITIES SUE RAILROAD FOR DIVERTING STREAM**

**Dozen Unite in War on Pennsylvania Railroad—Water Turned from Natural Courses—Funds Subscribed**

McKeesport, Pa.—War has been declared against the Pennsylvania Railroad by the city of McKeesport and a dozen of smaller municipalities along the Youghiogheny River, which stream, it is asserted, has almost been ruined by the railroad company. It is asserted that the company has, since its purchase of the Indian Creek watersheds, turned 30,000,000 gallons of water daily from their natural courses into the Youghiogheny, and that the entire pure water supply of the places referred to has been shut off. The initiative was taken by the Councils of McKeesport, and a committee has been named to prepare a suit to be entered at once. The movement is thoroughly organized, and sufficient funds have been subscribed to carry on the fight.

**Purify Butler Water**

Butler, Pa.—Because of complaints regarding Butler's water supply and the starting of litigation to compel oil well owners to cease discharging salt water into the streams which feed the Butler Water Company's reservoir, seven miles north of here, the State Board of Health has ordered a careful survey of the Connoquenessing watershed. Chief Engineer F. Herbert Snow and 12 assistants have proceeded to the northern part of the county. State Health Commissioner Dixon announces his department will endeavor to prevent the repetition of conditions which brought about the typhoid fever scourge in 1903, which resulted in nearly 200 deaths. A searching examination of the effect of salt water and surface pollution upon the water supply will be made.

**Well Water Is Contaminated**

Leavenworth, Kan.—City Physician Dr. C. R. Carpenter says that much of the sickness in the city is due to the use of impure water. Analyses of samples of well water from all parts of the city show, with few exceptions, that it is impure. Many of the wells are close to the sewers, so that there is no mystery about the source of the trouble. He advises citizens to boil their drinking water at least 20 minutes.

**Village Buys Water from Chicago**

Burnham, Ill.—An agreement has been made by which the city of Chicago will furnish water to the village of Burnham. The water will be metered at the point of delivery and charged to the village at the same rate as is charged in Chicago to consumers using the same amount of water.

**Conway to Have Good Pressure**

Conway, Ark.—Water works for Conway is the battle cry now. Theo. Hartman, consulting engineer, is looking over the situation. A large reservoir will be built two miles northwest of the city, on the Cadron Ridge, near Conway tunnel, and the water piped from there to the city, giving a fall of about 200 feet and making fire-fighting easy.

**Filter Forms in Ashes**

Philadelphia, Pa.—About three acres of wooden forms used in the construction of the Torresdale filter plant were completely destroyed by fire recently. Four engine companies were called out, but it was hard work and the blaze in the large piles of lumber soon gained such headway that it took the firemen about three hours to get the flames under control.

**Infringement of Water Purification System Claimed**

Muskogee, Okla.—At an informal meeting of Council members and prominent citizens John F. Wixford, St. Louis, Mo., who, while employed as chemist by the Water Works Department of that city, claimed to have discovered the process now used there for purifying the Missouri River water, gave some interesting demonstrations, using water from the Grand and Arkansas rivers. Some time ago City Engineer Kinsey installed a system of clarification by the use of a solution of sulphate of iron and lime, but recommended the use of filters to complete the process. Wixford's demonstration was intended to show that the chemicals could be used so as to bring about a degree of purification equal to that produced by filters. He also said that the process was a patented one, belonging to him.

**STREET LIGHTING AND POWER****Unused Wires Must Come Down**

Altoona, Pa.—All dead and unused electric wires which are strung on poles in this city, owned by either of the two electric companies, the telephone companies or other corporations, must be taken down at once, an order to that effect having been issued by City Electrician Charles Downs. Each company has been notified in writing, and unless the orders are carried out prosecutions will be made.

**Can Give No More Electric Lights**

Columbus, O.—Superintendent Gamper, of the municipal light plant, has notified the Board of Service that it will be impossible for him to furnish any more street lights, and it will be useless for the Board to refer any more communications to his department. Petitions are now on file for more than a hundred lights and until the changes and additional machinery can be installed there is no chance for the granting of any petitions. In order to help supply the demand a number of lamps now in alleys will be removed and placed on street corners, where they are needed most.

**City to Lease Its Gas Plant**

Gilroy, Cal.—At a called meeting of the City Council a resolution was passed looking to the leasing of the gas plant for 10 years. In the event of such leasing the lessee will be bound to fit it with appliances for manufacturing a prime article of gas, to refurnish the plant in all necessary respects, and at the expiration of the term to turn over all improvements and fixtures to the city. It was also resolved to advertise for bids to furnish the city for five years with electricity. Neither the gas nor electric plant has been profitable. The Council was unanimous in its action.

**FIRE AND POLICE****More Severe Penalties for Arson**

Albany, N. Y.—Assemblyman McNerney of Rochester has introduced a bill inspired by the fire in his home city. The measure makes the penalty for arson in the first degree life imprisonment instead of 40 years; second degree, 40 instead of 25 years, and third degree, 25 instead of 15 years. "The prevalence of serious fires such as we experienced," declared Mr. McNerney, "demands that we take great precautions against persons who have no respect for either property or life and deliberately set places on fire."

**Would Enjoin Discontinuance of Fire Pressure**

Carthage, Mo.—In reply to a notice from the Carthage Water and Power Company that it would discontinue fire pressure hereafter Council passed a resolution authorizing City Treasurer Harry Waters to tender to the attorney of the company a check for \$1,513, advance payment for six months' rental of the fire hydrants at the rate of \$34 per year. In case of the refusal of the company to accept the tender, City Counsellor J. D. Perkins was instructed to apply for an injunction preventing the water company from withdrawing its fire pressure.

**Wants Reserves for General Alarms**

Pawtucket, R. I.—A regular meeting of the Business Men's Association was addressed by representatives of the New England Fire Insurance Exchange, who had been invited to tell the members what they thought of conditions in the city. One of the speakers said that he thought the state of affairs disclosed by a recent report was about the worst he had ever heard of. Resolutions were passed urging the authorities to purchase two steam fire engines and to install a properly trained force to operate steamers, which it might be advisable to call out only on a general alarm.

**Finds Way to Get Fire Engine Down Hill**

San Francisco, Cal.—Captain O'Brien, of engine 31, has solved the problem of how to get a steam fire engine down the hill on Leavenworth street. Practically the residents on that street have been without fire protection on account of the topography of the neighborhood. Captain O'Brien, who is an old sailor, planted a stout post on the summit of the hill and imbedded a heavy iron eye in the ground a few feet away. With a snatch block and 275 feet of whale rope he held the engine in check while the horses walked slowly down the hill in front of the machine.



### CHILDREN MUST RESPECT POLICE

#### Evansville Chief Urges that This Be Taught in Schools— Closer Relations Between Citizens and Officers

Evansville, Ind.—A campaign to instill the Evansville youngster with respect for the Evansville policeman will be begun by Superintendent Cooley of the Public Schools if he follows the suggestions made to the School Board by Chief of Police Fred H. Breunecke.

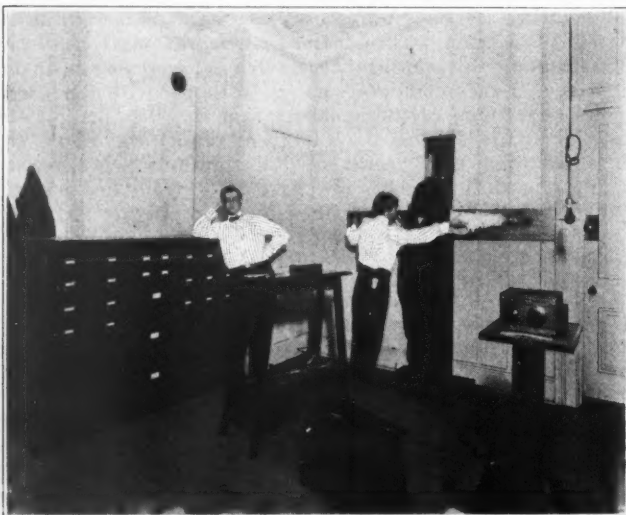
In a letter to the Board the Chief calls attention to the resolutions passed at the convention of the Chiefs of Police held at Detroit last June. He says that he approves of the resolutions and believes the time is at hand to bring the Police Department in closer relations with citizens. He suggests that when the school children have their next field day that the Police Department be given a place on the program. He also suggests that teachers give a short talk once a year on the relation of the policemen to citizens.

#### Councilman Has Right to Become Policeman

Youngstown, O.—The momentous problem of whether a Councilman may resign his office and accept a position on the police force has been engaging the attention of the Youngstown city officials, and, not being able to solve it, they had Solicitor Frank L. Oesch refer the question to Attorney General Denman for his opinion. The fear existed that if the Councilman quit and became a policeman he would be violating the statute prohibiting a public official from figuring in any public contract. The ruling of the Attorney General is that this act does not apply to the case in question and that there is no constitutional or statutory clause prohibiting the Councilman from resigning and becoming a blue-coated minion of the law.

#### Bertillon System Installed in Houston

Houston, Tex.—The Bertillon system of measurements, whereby criminals are identified, recently purchased from the Yawman-Erbe Manufacturing Company by the Houston Police Department, has been installed and turned over to the city. A room on the second floor of Police Headquarters has been fitted up for an operating room and the apparatus here has been placed in position. From now on every notorious criminal arrested in Houston will be measured. If he has a national reputation as a crook his measurements will be filed with the Bureau of Identification in Washington, D. C., where the Bertillon measurements of all the famous criminals in the world may be found on file. The salient feature of the Bertillon system is a hypothesis based on the assumption each person has some distinctive forms and features. These are measured. For instance, the length of the ear, the breadth of the head, the face at the neck bones, the fingers and the right foot. Since the system has been in operation the officials of the company assert there never has been known a case where two measurements have corresponded in every particular, thus justifying the assumption on which the system is based. It should be a great help to the police officials of Houston, and its cost was less than \$1,500.



TAKING BERTILLON MEASUREMENTS, HOUSTON, TEX.

### Ordinance Regulating the Sale of Revolvers

Indianapolis, Ind.—An ordinance regulating the sale of firearms has been introduced in the City Council by Councilman Harry E. Royse. The ordinance stipulates that revolvers shall be sold only to persons having a license from the Chief of Police. Before buying a revolver it is required that an application in writing first be made to the Chief of Police, giving the applicant's name, address, age and occupation, and the purpose for which the revolver is desired. Weapons are not to be sold to persons under 21 years of age. If the Chief decides that the applicant is a fit and proper person to own a revolver a license is to be granted, which must be presented to the dealer when the purchase is made. Fines of from \$25 to \$100 are provided for a violation of the ordinance.

#### More Police Wanted for Barge Canal

Lockport, N. Y.—In anticipation of trouble during the construction of the barge canal work, the Lockport Police Board has asked the Common Council to cause a bill to be drafted providing for the appointment of one policeman for each 1,000 population instead of one for each 1,200 of population. This will give the department four additional policemen. In order to take care of the extra expense incident upon having the extra patrolmen the Police Board wants the police fund increased from \$15,000 to \$20,000.

#### Baggy Trousers Not for Malden Police

Malden, Mass.—Revolver practice, discipline, shining of shoes, daily shaves when necessary, and the pressing of trousers three times a week are some of the innovations that have been introduced by Mayor G. Louis Richards to make the Police Department of this city come up to his expectations.

#### New Dress for Firemen

Philadelphia, Pa.—The firemen of the city will look considerably different when they appear in their new dress uniforms on May 1. The suits are in decided variance with those worn for the past several years, being patterned along the military lines of the police uniforms. The collar buttons close under the chin and the blouse is a six-button garment cut square at the bottom. The new caps are of the German military style now used by the sergeants and reserves of the police squads.

#### Monthly Inspection of Firemen

Utica, N. Y.—An order worded as follows has been issued by Safety Commissioner Church:

"To the Chief of the Fire Department:

"Sir:—Beginning with the month of April, I shall require a monthly inspection of firemen. This inspection will cover dress and working uniforms, caps, shoes, etc., and will be made by the captain of each company, supervised by yourself or one of the deputy chiefs. I would advise that the men in each company be sized up and always occupy the same places in line at roll call and at all other times when assembled as a company on the floor.

"I want special attention given to the condition of uniforms, as the appearance of the men is noted by strangers as well as by citizens, and the outward appearance of the force is usually taken as a fair index of the personnel of the department. I might add that even at present I am personally proud of the force, but as there is always room for improvement in any line, it is hoped by this system of monthly inspection to increase the efficiency of the department.

"No fireman will be excused from this inspection except for absence from the city or personal illness.

"Respectfully yours,

"THOMAS V. CHURCH,

"Commissioner of Public Safety."

#### New Fire Department Manual Adopted

Washington, D. C.—A new manual of rules of conduct and discipline for members of the Fire Department has been adopted and will soon be issued. It embodies all the improvements in practice made since the last revision in 1900. The most important of these are the rules for the prevention of fires by close and constant inspection of hotels, theaters, apartment houses, mechanical establishments and factories. Now, besides the Fire Marshal, there are four assistants constantly engaged in such inspections.



## GOVERNMENT AND FINANCE

### Atlanta Women Would Vote

Atlanta, Ga.—Along with the new idea of a commission form of government, the special committee which is creating a new charter for the city of Atlanta, is considering the advisability of permitting women to vote on some municipal questions, such as questions of issuing bonds. Leading local suffragettes have asked the charter revision committee of 49 to insert a limited form of municipal franchise in the new organic law of the city, and it is not altogether improbable that such will be done. In Georgia no woman has any kind of voting power, and whether or not a municipality can confer such without amending the constitution of the State is a question. However, the local woman suffrage organization is making a strong fight along that line.

### Baltimore May Revise Accounting System

Baltimore, Md.—As the result of the Downs embezzlement, and in response to the suggestion made by ex-Governor Warfield, president of the Fidelity Trust and Deposit Company, Mayor J. Barry Mahool will hold a conference with the officials of all the bonding companies in the city. The suggestion of Warfield provided that the city should agree to pay the premiums on all the bonds of city officials, in return for which the bonding companies entering the agreement will agree to revise the municipal system of accounting, and make semi-annual or annual audits of all the accounts, in addition to maintaining a strict supervision over the habits of all the employees and officials. Preparatory to the conference, which Mayor Mahool declared would probably result in such an agreement, he is now demanding reports from the various departments as to the number of employees bonded in each department.

### City Pays Two Mayors

Fostoria, O.—Quarterly vouchers issued for the pay of city officials included one for \$187.50 in favor of Carl C. Anderson and another for \$37.50 in favor of Frank Gebert, for services as Mayor, for 75 and 15 days, respectively. Attorney Jesse Stephens, for Congressman Anderson, talked of enjoining payment of the smaller one, but before he got around to it the voucher had been cashed. The Council had a communication from Mr. Anderson, stating that he had not abandoned the office of Mayor, and that he would take steps to retain it.

### Mayor of a Kansas City Is Ousted

Hutchinson, Kan.—The State Supreme Court has rendered a judgment against Mayor J. P. Harsha and all of the city officials. The charge against the Mayor and other officials was that they permitted violations of the prohibitory law and that "joints" and disorderly houses were given police protection upon payment of a monthly fine.

### Mayor Arrested for Running Blind Tiger

Lakeview, O.—Mayor Charles Miller and four other citizens have been arrested on the charge of conducting "blind tigers." The Mayor was elected on a "dry" platform. Mayor Miller is agent for the Ohio Electric Traction Company. He is accused of selling the liquor from a back door of the traction station. Besides the Mayor, E. D. Carr, Firm Wirick, Al. Anderson and Al. Byers were arrested. Byers conducts a livery stable and is accused of dispensing liquor from his hay mow. Carr is the town undertaker, and he is said to have kept whisky for sale in his place of business.

### Municipal Library to Be Established

Minneapolis, Minn.—Minneapolis is to have a municipal library containing a collection of works dealing with city problems. Alderman Wedell Hertig is back of the move, and has been promised enough support to secure a suitable appropriation. It will be placed in the old Health Department quarters, on the first floor of the City Hall, and H. A. Stuart, City Statistician, will be the librarian. The city already has a large number of valuable books of this character scattered about the several departments. These will all be collected, classified and catalogued in order to make them readily accessible to any who may desire to study them.

## COMMISSION FORM OF GOVERNMENT

### Tacoma, Wash., to Revise Charter—Minnesota Cities May Adopt Plan—Pennsylvania Cities Favor Change

Tacoma, Wash.—The City Council has decided to call a special election to select fifteen freeholders to revise the city charter of Tacoma, to provide a commission form of government. As soon as the freeholders are elected they must start their work within ten days and must complete it within sixty days. The new charter will be advertised for thirty days and then be submitted to a vote of the people. If approved by the people, the new law will take effect at once.

St. Paul, Minn.—The Senate has passed the House bill permitting any city in the State to adopt the so-called Des Moines plan of city government.

Reading, Pa.—The Reading Board of Trade has adopted resolutions joining with the Meadville Chamber of Commerce in the demand for legislative permission to put the question of municipal government by commission up to the voters of Reading.

### Responsibility on the City Solicitor

Scranton, Pa.—The following resolution has been adopted by the Common Council: "Resolved, That immediately upon the passage of any city ordinance by either branch of Councils and before the same shall be presented to the Mayor for his approval, the City Solicitor shall notify him that he has examined the said ordinance and that said ordinance is legal in every particular and that all the requirements in passing the said ordinance through Councils have been complied with."

### Powers of New Board of Control

Wheeling, W. Va.—The ordinance defining the powers and duties of the Board of Control under the new city charter is in the course of preparation by the ordinance committee of Council and when completed will be very comprehensive, covering in detail everything pertaining to the powers of this all-important executive body. The ordinance when printed will occupy about 150 pages of the ordinance book. The Board of Control, which has not yet taken charge, will have the management and control of all the works of public utility owned by the city, and the maintenance of the streets, wharves, public grounds and all other improvements owned by the city are in the charge of the Board. They will also have the management and control of the Police Department, Fire Department, Health Department and all departments and institutions operated by the city.

### Advertise for a Mayor for New York

New York, N. Y.—Indicating its purpose to become an active factor in the approaching Mayoralty election in Greater New York, the New York Young Men's Christian Association recently caused to be inserted in the different newspapers an advertisement for "A successful business man to apply for the position as candidate for Mayor of New York. Salary, \$15,000." Explanations followed later. Frederick G. Space, associate educational director of the Young Men's Christian Association in New York, said that a Business Mayor's Club had been formed within the organization which had for its purpose the selection of a candidate for Mayor upon whom all elements in sympathy with the movement might unite.

### Advocates Municipal Newspaper

Philadelphia, Pa.—Mayor Reyburn is advocating the establishment of a Bureau of Statistics and Information. He also wants a weekly or monthly newspaper published which shall keep the citizens informed about the work of the various departments.

### Vetoes Bill for Beer

Portland, Me.—Mayor Leighton recently refused to approve a bill for \$44.14 for beer and "other refreshments" which were used by the members of the City Council on their annual outing at Mitchell's in Scarborough. The City Council, by almost a unanimous vote, passed an order directing the City Treasurer to pay this bill, but the Mayor has said that the prohibition city of Portland would pay no beer bills with his consent.

## REFUSE COLLECTION AND DISPOSAL

### Aeronaut Would Sprinkle Streets

Dayton, O.—While it would be a pleasing innovation to have the streets of Dayton sprinkled by the use of a water tank from an aeroplane, and perhaps some people might look for that method of sprinkling should Lorin Wright be awarded any of the contracts, the bidder announced he would use the old-time sprinkling cars for this summer at least. Lorin, a brother of Wilbur and Orville Wright, was one of the bidders for street sprinkling contracts.

### Baltimore's Reduction Plant in Operation

Baltimore, Md.—After making an inspection of the new reduction plant of the Southern Products Company at Bodkin Point, Mayor Mahool and a party of city officials expressed themselves as being pleased with the plant. The plant, which was completed at a cost of \$180,000, is built on the Edgerton-Arnold system, the same that is in use in New York, Boston and Philadelphia. The building meas-



GARBAGE REDUCTION PLANT FOR BALTIMORE, MD.

ures 110 by 200 feet and is built of corrugated iron, the floors being of reinforced concrete. Garbage is carried by a belt conveyor into twenty-eight digestors of ten tons capacity each. There are seven compressors for pressing the oils out of the tankage. The liquids flow by gravity into fourteen catch basins. The plant is now in operation.

### Sprinkling Carts and Water Pressure

East Orange, N. J.—Seventeen sprinklers started out in East Orange, April 1, to prosecute the work of municipal dust laying. "The fact that they were 'on the job' before 8 o'clock," said Superintendent of Water Works Arthur A. Reimer, "is plainly shown by this gauge," pointing to the device in the Water Department which registers the water pressure in the mains from hour to hour. Where there is, under ordinary circumstances, a fairly regular line, indicating the pressure that morning it was uniformly zig-zag, showing that extraordinary drafts were made on the flow repeatedly from early morning.

### Will Gather the Garbage and Pay for It

Seneca Falls, N. Y.—A proposition has been submitted to the Village Board of Trustees by Frank Seigfried for gathering garbage. He proposes that if suitable receptacles are used and placed as he directs that he will collect the garbage in part of the village free of charge and will pay \$50 in cash or \$100 in labor for the privilege.

### Washington Clean-up Campaign

Washington, D. C.—In the twenty days following the inauguration of the clean-up campaign 1,200 cubic yards of refuse have been carted away from 1,500 of the city's vacant lots. It is estimated that there are still 9,000 wood sheds, back yards and cellars that need cleaning. Placards will be placed in all alleys warning the public not to deposit rubbish in them. An organization of women started by the Twentieth Century Club has been formed, which, under the direction of captains chosen over each block or district, to see to the cleaning of yards, parking and sidewalks. On April 15, the day appointed for the final clean-up, Mrs. F. V. Coville, chairman of the committee, toured the city in an automobile. The women did not do the actual work of cleaning with brooms and shovels, but merely ordered their servants to clean up the premises, or, in some instances, their husbands. Anyway, the town became spotless.

### African Costume for White Wings

Syracuse, N. Y.—Owing to the adoption of the khaki uniform for the street-cleaning force, the men are likely to lose their long-standing title of "white wings" and at the City Hall the men are now being called "Westcott's Brownies," Frank M. Westcott being Commissioner of Public Works. Nearly 200 of these uniforms have been ordered, with the regulation khaki hat, and when the force is sent out for duty in a few days the uniforms will make their first public appearance. A number of the men employed at first offered some objection to the abandonment of the time-honored near-white uniform, but these complaints were soon overcome when the Commissioner showed them the label on the boxes, which in glaring letters reads: "Roosevelt African Hunting Outfit."

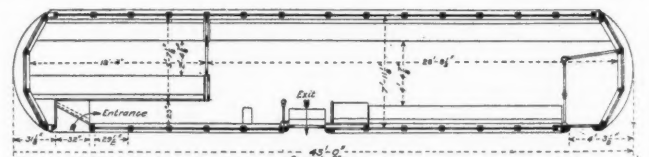
## RAPID TRANSIT

### Seek Entrance for Interurban Cars

Cincinnati, O.—A discussion of interurban tractions and terminal facilities for Cincinnati was held at the Business Men's Club. Mayor Bookwalter, of Cincinnati, was the principal speaker. He explained the great advantages that have resulted through the introduction of interurbans in Indianapolis. There are now fourteen lines using the traction terminal station. In 1903 2,236,000 passengers were brought into the city; in 1908 the number had increased to 4,979,000. President Schoepf, of the traction company, explained his views of the local terminal problem. He said there were 1,800 miles of interurban road that desired a Cincinnati terminal. The use of the right of way of the Miami canal was spoken of as affording a suitable entrance to the city.

### Unique Trolley Car Works Well

Pittsburg, Pa.—A street car without a platform and without a front or rear exit was recently tried on the streets of Pittsburg. The new car, which is said to be the best ever used in Pittsburg, is the invention of ex-County Commissioner Charles B. Price, a railroad man of many years' experience. The exit is at the side in the middle of the car. The conductor stands at the side of this exit between two rails to protect him from crowding. A touch of his hand to a brass lever opens or closes the door of the exit. None can pass out until the door is opened by the conductor, and thus an always apparent danger of accident is obviated. The only entrance is at the rear, and in the one



NEW CAR WITHOUT PLATFORMS—CENTRAL SIDE EXIT

car in use there is no door, but it is contemplated that a sliding door similar to that at the entrance shall be introduced, so that when the car is filled the conductor, by a touch of the hand to a pneumatic lever, may close the door and prevent reckless persons from catching the rails and crowding in. The passenger on entering must go on through a passage beside a smoking room, such as that in the palace cars of steam railways. There is no chance to loiter. The person who does not at once pass on to the angle where the smoking room ends to admit the full width of the car is compelled to move on by the next passenger to enter. It is a "pay-on-entrance" car with a vast improvement on the present system.

### Orders Ornamental Poles Near Park

Waterbury, Conn.—The Board of Public Works has ordered the street railway company to replace the trolley poles in the neighborhood of the proposed parks on Grand street with ornamental iron poles.

### Municipal Car Line in Canada

Calgary, Alta, Can.—Work on the municipal traction line is being pushed rapidly. The rails used are 80 and 60-pound; steel poles are used on the main street and cedar poles on the rest of the system, amounting to 12 miles altogether. The power house is also under construction, and 12 semi-convertible pay-as-you-enter cars are being built. The system will represent an investment of \$400,000.



### MISCELLANEOUS

#### Bath Each Week for Every Pupil

Chicago, Ill.—“A bath for every pupil in the elementary schools once a week—if he needs it,” is the motto under which the Chicago Board of Education is proceeding in an unprecedented movement for personal cleanliness in the schools. The latest move in the campaign was presented at a regular board meeting in the form of a report and recommendation from the school management committee. It is set forth that greatly increased bathing facilities in the elementary schools are needed more than any other improvement. The report gives as proof the fact that eighteen schools are lacking entirely in bathrooms and thirteen others are provided with only one or two baths, of which the capacity is from 100 to 150 baths a week.

#### City Will Spend \$10,000 on Trees

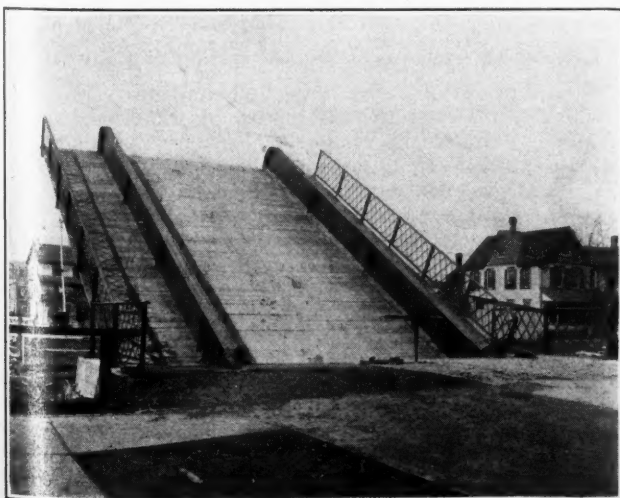
New Haven, Conn.—It was voted by the Finance Board to authorize the Director of Public Works to spend a sum not to exceed \$10,000 for care and attention to the trees on public squares and streets. This was after listening to the urging of prominent citizens, including ex-Governor Rollin S. Woodruff, Judge A. Heaton Robertson, Professor Graves of the Yale Forest School, Colonel Isaac M. Ullman and Henry T. Blake, regarding the necessity of creating an emergency fund at once to take care of the trees of the city in order to save them from destruction by a renewal of the elm tree beetle invasion this summer.

#### Biggest Year's Work in City's History

Philadelphia, Pa.—Mayor Reyburn, in his annual message, says that the reports from the various departments and bureaus verifies his claim that there was more physical work actually completed in the year 1908 than was ever accomplished in any one year in the city's history.

#### Rolling Lift Bridge Over Miami Canal

Miamisburg, O.—Among the recent improvements along the line of the Miami and Erie Canal is a Scherzer rolling lift bridge at Linden avenue, Miamisburg. The bridge is a through plate girder structure with a movable span center to center of bearings of 43 feet 3 inches, giving a clear channel for navigation of 40 feet wide. The roadway is 20 feet wide in the clear with two 6-foot sidewalks. The bridge is operated by hand power by one man and can be opened and closed so rapidly as to cause little or no delay to street traffic or boats navigating the canal. The power for operation is applied through a key located in the middle of the roadway of the approach, just in the rear of the break in the floor, and is transmitted through a system of gearing to pinions engaging in racks on the rear ends of the main girders. The bridge is locked in any position by means of pawls which engage ratchets on the main shaft, the pawls being accessible for setting by the operator while at the operating key. The entire structure was contracted for with Al. S. Fox, structural engineer and contractor, Dayton, O., manager for Ohio, Indiana and New York, and executed under the direction of County Engineer H. R. Klepinger and the Commissioners of Montgomery County.

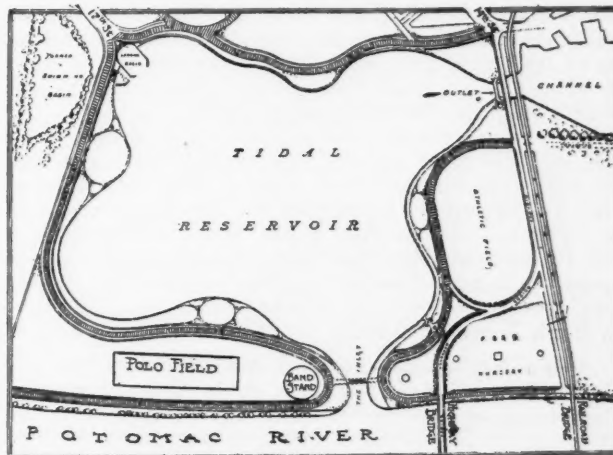


SCHERZER BRIDGE, MIAMISBURG, O.

### OUTDOOR SOCIAL CENTER FOR WASHINGTON

#### National Capital to Rival Foreign Cities in Its Speedway—Band Concerts a Feature—Improvements in View

Washington, D. C.—President Taft has issued orders that will make the speedway in Potomac Park the great outdoor social center of Washington, similar to the Molecon in Havana, the Lumetta in Manila, Hyde Park in London and the court of honor in Florence. The orders issued by the President are for the erection of a bandstand on the speedway, where the Marine Band will play music twice a week during the summer months. These concerts will start at 5 o'clock and end at 7 o'clock. President and Mrs. Taft



PROPOSED ESPLANADE FOR WASHINGTON, D. C.

have decided to be present at each of the concerts. The stand is to be at the point of the ellipse where the main speedway turns down and runs alongside the river and near the new concrete bridge which will connect the mainland with Potomac Park. The plan of turning the speedway into one of the big social centers of the world, it is understood, originated with Mrs. Taft. It is known to have her full approval. She has had the idea under consideration for some time. It is probable that at the next session of Congress the President will ask Congress to grant appropriations for further improvements such as will add attractiveness to the locality.

#### To Restore Jeff Davis' Name at Cabin John

Washington, D. C.—Major Morrow, engineer officer in charge of the Washington water supply system, to whom has been assigned the duty of restoring the name of Jefferson Davis to the tablet on Cabin John bridge, has made a contract for the execution of the work with J. H. Shelton & Co., of this city, at their bid price of \$147.75. The name of the president of the Southern Confederacy was removed in 1862. To restore the name it will be necessary to cut out the names of Presidents Lincoln and Pierce and Secretary Simon Cameron, and then put them all back on the same level.

#### Philadelphia May Build a Municipal Ice Plant

Philadelphia, Pa.—Public spirited residents are formulating plans to have the city install a municipal ice plant before the heat of summer brings its miseries to the poor. It is pointed out that the city could provide ice at cost for the worthy poor from a plant which could be installed at little comparative cost. The project will be presented to Council. For several years charitable enterprises have furnished ice for the poor in the summer, but the high prices almost sure to be charged this year will greatly hamper the work.

#### To Interest Business Men in New Tax Laws

Baltimore, Md.—With the view of getting the local business and commercial men interested in the formation of new tax laws and in adopting plans for the encouragement of industrial expansion, the First Branch City Council, on motion of Dr. Heatwole, adopted a resolution requesting the Merchants and Manufacturers' Association, the Travelers and Merchants' Association, the Chamber of Commerce and the Stock Exchange to furnish the branch with their ideas and all possible information on both questions.

## LEGAL NEWS

### A Summary and Notes of Recent Decisions—Rulings of Interest to Municipalities

#### Sidewalk—Repairs—Reconstruction

**Konowalski vs. City of Buffalo.**—Buffalo City Charter requires the owner or occupant of premises to lay and relay sidewalks whenever ordered, and to keep the sidewalk in good order and repair. It also requires that the Commissioner of Public Works shall notify the owner or occupant of any premises in front of which any such work, except the removal of stone and ice, and the repair of sidewalks, shall be required to be done, and, if the same is not done by the owner or occupant within ten days, it shall be done by the city and the expense assessed against the property. There was a plank sidewalk five feet wide in front of plaintiff's premises, which plaintiff was directed to repair, and, after he had failed to do so, the Commissioner caused the entire walk to be removed, and constructed a new concrete walk 17½ feet wide, the cost of which was assessed against the premises. Held, that the construction of such new walk was not a repair, but was a reconstruction, which the Commissioner had no authority to make except pursuant to a resolution of the City Council after notice to the property owner and an opportunity to be heard.—New York Supreme Court.

#### City's Negligence—Tortious Act of Contractor

**McManus vs. City of New York et al.**—Where a city lets the repairing or construction of a road to an independent contractor, the city remains bound to keep the street in a safe condition; but it is not liable for tortious acts of the contractor's servants which result in injury to the vehicle of one using the street. In an action against a city for injuries to an automobile from an obstruction in a street upon which work was being done for the city by an independent contractor, it was a question for the jury whether the injury resulted from the city's negligence, or whether it was the result of tortious acts of the contractor's servants.—New York Supreme Court.

#### Unguarded Sewer—Instructions

**City of Richmond vs. Poore.**—Where, in an action against a city for injuries caused by falling into an open sewer at night, the evidence for the city tended to show that when the workmen left the sewer trench it was properly barricaded and lighted and that both barricades and lights were in place next morning, while plaintiff's evidence tended to show that when the accident occurred no lights or barriers were there, the jury might infer that the lights and barriers were removed without the knowledge of the city. Hence an instruction defining the liability of a city if the lights and barriers had been so removed was not objectionable as assuming a state of facts of which there was no evidence.—Supreme Court of Appeals of Virginia.

#### Change of Grade—Damages

**Delaware, Lackawanna & Western Railroad Co. et al. vs. City of Summit et al.**—Under the provisions of the act of 1889, an assessment for damages to the owner of a building or buildings standing and erected upon any street the grade whereof has been changed by municipal action must be limited to the damages resulting to the buildings, and an award by commissioners based upon the depreciation in value of the entire property is illegal.—Supreme Court of New Jersey.

#### Abutment in Waterway—Damage to Land

**Prime et al. vs. City of Yonkers.**—That an old abutment in a city waterway did not cause injury until after dams were taken down, and that this was done by an agent for which the city was not responsible, held not to shield it, if the abutment then made the waterway inadequate, and the city omitted reasonable care in maintaining it. In an action for a city's negligence as to a water course wherein it left an old abutment after removal of dams, it was competent to inquire as to the skill and propriety of the construction of the wall, as to the protection of the bank which washed away. Testimony of an expert witness, in an action by a city for negligence, as to an old abutment left in a waterway, considered, and held not to warrant a claim that it did not support plaintiffs.—New York Supreme Court.

#### Statutes Impairing Obligation of Contract—Taxes

**City of Cleveland, Tenn., et al. vs. United States et al.**—The impairment of the obligation of a contract by a State, which is forbidden by the Constitution of the United States, is not limited to cases where the statute destroys the remedy for enforcement of the contract and provides no other, but includes all cases where the substitution of a different remedy is of one in substance more difficult, more burdensome and uncertain than the one repealed, and which appreciably lessens the value of the contract. Relator recovered a judgment against the defendant city based on a contract payable from current taxes. At the time when the contract was made such taxes which might be levied were limited by the city's charter, and the property taxable was required to be assessed by the City Recorder at its full value. Subsequently a State statute required all assessments to be made by a County Assessor, whose assessments are reviewed first by the County Board and next by the State Board of Equalization; and this assessment is to be copied by the City Recorder for city purposes. Held that, as against relator, such statute was void as impairing the obligation of his contract by depriving him of a remedy against the Recorder to compel an assessment of property at its true value; that it therefore did not repeal the provision of the charter for assessment by the Recorder, and that he could be compelled by mandamus to reassess property for previous years which had been assessed by the County Assessor at less than its value, and to levy and collect taxes on the valuation omitted, to be applied on relator's judgment. Where a city was given by statute authority to borrow money for the erection of public buildings and to issue its bonds therefor and levy a special tax for their payment, it had not the right to use its current revenues for the erection of such buildings as against a judgment creditor whose judgment is payable only from the surplus of such revenues above current expenses; and, where it has so diverted current revenues, the judgment creditor is entitled to be substituted to the right which a bondholder would have had, and to compel the levy of a special tax to replace the money so diverted. In granting a writ of mandamus to compel the levy of a tax by a municipal corporation to pay a judgment, the court may, in the exercise of broad equity powers, direct the distribution of the tax over a number of years, where it would otherwise impose a hardship on taxpayers.—United States Circuit Court of Appeals.

#### Improved Street Defined

**Coulson et al. vs. Mayor, etc., of City of Baltimore.**—The annexation act as amended by the Foutz act, defines a block of ground for taxation purposes to be an area bounded by streets, etc., opened, graded, curbed, and otherwise improved from curb to curb by pavement of some substantial material, etc. A particular avenue was opened, graded, and curbed on both sides, and has properly paved gutters. The space occupied by car tracks, and two feet outside of them was paved. The remaining strips lying between the gutters and the paving along the tracks which are six or seven feet wide have substantial bases and a pike macadam condition. Held, that the avenue is improved within the meaning of the statute.—Court of Appeals of Maryland.

#### Consent to Assignment Not Alteration of Contract

**City of New Rochelle vs. Aetna Indemnity Co.**—Where a drain contract forbids the assignment by the contractor of any money due him thereunder, except with the city's consent, the subsequent assignment of the money due the contractor with the consent of the City Council was not an alteration of the contract, so as to release the contractor's surety for the performance of the work from its obligation to complete the work after the contractor had abandoned it.—New York Supreme Court.

#### Dentists' License as Police Regulation

**Johnson vs. City of Great Falls et al.**—Laws 1897, authorizing a City Council to license all industries, pursuits, professions, and occupations, and imposing penalties for failure to comply with such license requirements, is a police regulation, and the imposition of a license tax on dentists by a City Council acting under that statute is imposed for police purposes only.—Supreme Court of Montana.



## NEWS OF THE SOCIETIES

**International Association of Fire Engineers.**—The following topics have been selected for discussion at the annual meeting at Grand Rapids, Mich., August 17-20, according to a statement issued by James McFall, of Roanoke, Va., the Secretary:

In cities where an efficient and complete high-pressure water service has been installed, is it safe to discard steam fire engines and depend entirely on the high-pressure service?

The automobile as a fire-fighting appliance.

How does fire risks of America compare with those of foreign countries and what are the most economical reforms to be made in our building construction?

Spontaneous combustion.

Rubber tires for fire apparatus.

Moral hazards.

The operation of a water tower.

Fire prevention.

The necessity for the office of State Fire Marshal.

The Welfare of the Association and the benefits to be derived by chiefs from attending the convention.

Beneficial results from the inspection of Fire Departments by the Committee on Fire Prevention of the National Board of Fire Underwriters.

**Association of Texas Chiefs of Police.**—M. T. Forrest, Secretary of Houston, Tex., has returned from Galveston where arrangements have been practically completed for the annual meeting of the organization to be held there in May. Mr. Forrest states that there is much interest being taken in the meeting, which promises to be one of the best yet held by the organization. Committees have been appointed to arrange for the entertainment of the convention and these have the hearty co-operation of the citizens of the Island City. Mr. Forrest also states that he has received a large number of letters from members of the organization all over the state, and the indications are for a larger attendance than in Houston at the last meeting.

**National Academy of Art.**—The regents of the National Academy of Art, believing the time is ripe for such a movement, have taken the initiative in the formation of a national federation of art institutions, art societies, municipal and village improvement societies, and all other associations which are intended to improve the appearance of material things and to cultivate the public taste. Invitations are being sent to all associations and institutions that are interested in art and art education, and kindred subjects to send delegates to a convention to be held at the New Willard Hotel, Washington, D. C., May 11 and 13, when it is expected that the proposed federation will be completely organized by the delegates and plans of co-operation will be devised. Addresses will be delivered by a number of men prominent in art circles who have had experience in promoting similar public movements. The convention will be held under the auspices of the board of regents of the National Academy of Art, of which J. Pierpont Morgan is president, Charles M. Foulke of Washington, Charles L. Hutchinson of Chicago and H. Winthrop Pierce of Boston are vice-presidents, and Senator Root, Senator Lodge, Senator Newlands, Henry Walters of Baltimore, Charles L. Freer of Detroit, James J.

Hill of St. Paul, Mrs. Levi P. Morton of New York, Mrs. Phoebe A. Hearst of California, Mrs. Frank O. Lowden of Chicago, Mrs. Bellamy Storer of Cincinnati and several other equally prominent women and men are members. Glenn Brown of Washington, D. C., is secretary of the board of regents.

**Engineers Club of Central Pennsylvania.**—At the monthly meeting at Harrisburg, Pa., the question of erecting the sanitary dam in the Susquehanna river was taken up and a resolution was passed to appoint a committee to investigate and report with recommendations. The resolution recites that one of the undeveloped natural resources of the city of Harrisburg is the river, whose water power is now running to waste, and whose scenic potentiality is undeveloped. Several years ago at a municipal election, a bond issue was authorized to pay for building a dam across the river, but nothing has been done. As it is not clearly understood by the public, and particularly by the members of the club, to what extent the plans proposed subserve the public interests, as outlined, the committee is appointed to clear the matter up. President Snow presented a report in which he called attention to the fact that many cities to-day are giving much attention to the establishment of systems of decorative lighting of streets, parks, boulevards and bridges. The report, which was a most interesting one, was followed by the announcement that the Board of Directors has accepted a fund, established by a club member, to provide for the award of prizes for meritorious designs for engineering structures. It is the wish of the founder of this fund that the first competition shall be for the three best designs for ornamental poles for the support of city wires transmitting light, power and messages. The acceptance of the fund was ratified by the members, and President Snow named as a prize committee the following: Paul A. Cuenot, Carl B. Ely, F. B. Musser, C. H. Lloyd and J. C. Reed. A board of award will be named later by the president. A proposition was made to change the name of the club from the Engineers' Club of Central Pennsylvania to The Pennsylvania State Society of Engineers. The matter was referred to the Board of Directors.

**Water Works Manufacturers' Association.**—The Committee on Transportation, Walter H. Van Winkle, Chairman, 180 Broadway, New York, N. Y., although they have not yet completed definite arrangements, have in view the chartering of a special vestibule train for the coming convention of the American Water Works Association, which is to be held in Milwaukee, Wis., the week beginning June 7, 1909. It is proposed to have a train equal to the Chicago "Limited" on the Pennsylvania Railroad to include a buffet smoker, dining car, observation car and necessary sleepers. The train, if secured, will leave New York Saturday, June 5, about 11 a. m. So far 90 delegates have expressed a desire to go on this train. Anyone who contemplates attending this convention is advised to consult the committee before making arrangement for transportation. No extra fare will be charged on the train.

**Municipal Engineers of the City of New York.**—The next regular meeting will be held April 28, at 8:15 p. m., in the Engineering Societies Building, 29 West Thirty-ninth street, Manhattan.

A paper entitled "Improvement of the Appearance of Municipalities" will be presented by Charles W. Leavitt, Jr., landscape engineer, and will be illustrated by lantern slides. A luncheon will be served after the meeting. C. D. Pollock is secretary of the society.

**American Society of Mechanical Engineers.**—The following papers have been announced to be presented at the spring meeting in Washington, D. C., May 4-7.

"A Unique Belt Conveyor," Ellis C. Soper.  
 "Automatic Feeders for Handling Material in Bulk," C. Kemble Baldwin.  
 "A New Transmission Dynamometer," Prof. Wm. H. Kenerson.  
 "Polishing Metals for Examination with the Microscope," A Kingsbury.  
 "Marine Producer Gas Power," C. L. Straub.  
 "Operating System for a Small Producer Gas Power Plant," C. W. Obert.  
 "A Method of Improving the Efficiency of Gas Engines," T. E. Butterfield.  
 "Offsetting Cylinders in Single-Acting Engines," Prof. T. M. Phetteplace.  
 "Small Steam Turbines," Geo. A. Orrok.  
 "Oil Well Tests," Edmund M. Ivens.  
 "Safety Valve Discussion."  
 "Specific Volume of Saturated Steam," Prof. C. H. Peabody.  
 "Some Properties of Steam," Prof. H. C. Heck.  
 "A New Departure in Flexible Staybolts," H. V. Wille.

## Calendar of Meetings

**April 21.**  
**Western Society of Engineers.**—Regular meeting, 1735 Monadnock Block, Chicago, Ill.—J. H. Warder, Secretary.

**April 21.**  
**American Society of Civil Engineers.**—Regular meeting at Society House, 220 West Fifty-seventh street, New York.—Charles Warren Hunt, Secretary.

**May 11-14.**  
**Playground Association of America.**—Third annual congress, Pittsburg, Pa.—Henry S. Curtis, 705 Ouray Building, Washington, D. C.

**May 16-19.**  
**City Marshals and Chiefs of Police of Texas.**—Annual convention, Galveston.—Chief J. H. Maddox, Fort Worth, Chairman Executive Committee.

**May 20-22.**  
**Southwestern Electrical and Gas Association.**—Annual meeting, Dallas, Tex.—R. B. Stichter, President, Dallas, Tex.

**June 1-4.**  
**National Electric Light Association.**—Thirty-second convention, Atlantic City, N. J.—John F. Gilchrist, Engineering Societies Building, 29 West 39th street, New York, N. Y., Secretary.

**June 8-12.**  
**American Water Works Association.**—Twenty-ninth annual convention, Milwaukee, Wis.—J. M. Diven, Secretary, 14 George St., Charleston, S. C.

**June 15-19.**  
**International Association of Police Chiefs.**—Annual convention, Buffalo, N. Y. Maj. Richard Sylvester, President, Washington, D. C.

**June 28.**  
**American Institute of Electrical Engineers.**—Annual convention, Hotel Frontenac, Thousand Islands, Frontenac, N. Y.—R. W. Pope, Secretary, 33 West 39th street, New York, N. Y.

**July 6-9.**  
**American Society of Civil Engineers.**—Annual convention, Mount Washington Hotel, Bretton Woods, N. H.—Charles Warren Hunt, Secretary, 220 West 57th street, New York, N. Y.

**August 25-27.**  
**League of American Municipalities.**—Thirteenth annual convention, Montreal, P. Q., Canada.—John MacVicar, Secretary, Des Moines, Ia.

**November 9-11.**  
**American Society of Municipal Improvements.**—Annual convention, Little Rock, Ark.—A. Prescott Folwell, Secretary, 241 W. 39th St., New York, N. Y.

**May 6-8.**  
**American Electrochemical Society.**—Annual meeting, Niagara Falls, Canada.—Jos. W. Richards, Secretary, Lehigh University, South Bethlehem, Pa.

**May 25-27.**  
**National Fire Protection Association.**—Annual meeting, New York, N. Y.—W. H. Merrill, Secretary, 382 Ohio street, Chicago, Ill.

## THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

### BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
<b>STREET IMPROVEMENTS</b>				
Louisiana.....	Franklin.....	Apr. 22.....	Brick curbing, 7,980 sq. ft.; cement sidewalks, 31,719 sq. ft....	Chas. N. Frost, Mayor Pro. Tem.
Michigan.....	Grand Rapids.....	Apr. 22.....	Furnishing paving brick to city.....	L. W. Anderson, City Engineer.
Massachusetts.....	Boston.....	Apr. 22, noon.....	Bldg. macadam roadway in Upham ave., Dorchester.....	Guy C. Emerson, Supt. Sts.
Ohio.....	Elyria.....	Apr. 22, noon.....	Paving East ave.; also East River st.....	Board of Public Service.
Ohio.....	Cincinnati.....	Apr. 23, noon.....	Improving 1,500 ft. of five roads, Sycamore twp.; Spec. No. 870-74.....	Fred. Dreihls, Clk. Co. Comrs.
Massachusetts.....	Boston.....	Apr. 23, noon.....	Bldg. macadam roadway in Stonehurst st., Dorchester.....	Guy C. Emerson, Supt. of Sts.
New York.....	Harrison.....	Apr. 23, 2 p.m.....	Brick paving, 19,200 sq. yds.; curbing, storm drains, etc., Halstead ave.; also macadamizing, etc., 4 miles of streets.....	John M. Farley, C.E., White Plains.
Pennsylvania.....	Monessen.....	Apr. 23.....	Furn. 100,000 vit. repressed and 25,000 hillside paving block; 1,650 ft. 6x24-in. and 1,900 ft. 4x18-in. curbing.....	C. B. Parkinson, Borough Engr.
Missouri.....	St. Charles.....	Apr. 23, 8 p.m.....	Bldg. 28,608 ft. granitoid sidewalk, 7,226 ft. comb. curb & gutter	Carr Edwards, City Engineer.
Utah.....	Salt Lake City.....	Apr. 23, 8 p.m.....	Grading, curbing, gutter, sidewalks Extension. No. 8.....	Louis C. Kelsey, City Engineer.
Iowa.....	Des Moines.....	Apr. 23.....	Asphalt and vit. brick paving, 10,213 sq. yds.....	Geo. F. Poorman, City Clerk.
Ohio.....	Cincinnati.....	Apr. 23, noon.....	Asphalt paving, granite curb, etc., Barr st.; wood block or bitulithic paving, granite curb, Pioneer st.....	John J. Wenner, Clk. Bd. Pub. Serv.
New York.....	Troy.....	Apr. 23.....	Paving, curbing, grading, portions Down st. and Park ave.....	Jas. M. Riley, Clk. Bd. Cont. & Sup.
Nebraska.....	Lincoln.....	Apr. 24, noon.....	Brick paving, streets; concrete paving, alleys.....	Thos. H. Pratt, City Clerk.
Ohio.....	Middleport.....	Apr. 24, noon.....	Bldg. brick pavement and drainage system, 3 streets.....	F. G. Hunker, Village Clerk.
Ohio.....	Cambridge.....	Apr. 24, noon.....	Furn. vit. brick paving blocks.....	A. J. Hall, Pres. Bd. Pub. Serv.
Dist. of Col'bia.....	Washington.....	Apr. 24, noon.....	Grading Mass. ave. N. W., between Wis. and Neb. aves.....	Maj. W. V. Judson, Eng'r Com'r.
Ohio.....	Cleveland.....	Apr. 24, 11 a.m.....	Grading, draining and improving Ridge road No. 2.....	Wm. F. Black, County Clerk.
Texas.....	Galveston.....	Apr. 26, noon.....	Brick paving, 15,395 sq. yds.; concrete sidewalk, 4,650 sq. yds.; concrete curb, 5,040 lin. ft.; iron fence, 2,500 lin. ft.....	John M. Murch, County Auditor.
Michigan.....	Detroit.....	Apr. 26, noon.....	Furn. road oil, crushed stone, etc.....	F. D. C. Hinchman, Com'r Park D'pt.
Ohio.....	Ashland.....	Apr. 26, 2 p.m.....	Macadamizing and piking 5 miles of roads and village streets.....	C. D. Livingston, Township Clerk.
Massachusetts.....	Boston.....	Apr. 26, 2:30 p.m.....	Surfacing and grading Sec. 1, Boston embankment.....	H. D. Yerxa, Chm. Chas. Riv. Com.
South Carolina.....	Columbia.....	Apr. 26, noon.....	Laying granolithic sidewalk, 1,600 sq. yds., Main st.....	A. W. Edens, City Engineer.
Ohio.....	St. Bernard.....	Apr. 27, noon.....	Sidewalks on Spring Grove ave.; Geo. Schroeder, Vil. Clk.....	J. A. Stewart, C.E., Traction Bldg., Cincinnati.
Wisconsin.....	Madison.....	Apr. 27, 2 p.m.....	Furn. material and macadamizing several sts. and alleys.....	O. S. Norsman, Clk. Bd. Pub. Wks.
Pennsylvania.....	Conemaugh.....	Apr. 27, 4 p.m.....	Brick paving, 19,000 sq. yds., 7 sts.; also 2 sts. separate.....	O. P. Thomas, Borough Engineer.
Ohio.....	Bucyrus.....	Apr. 27, noon.....	Grading, macadamizing, etc., 7 sections road, 26,000 ft. long.....	Chas. Kising, Trus. Tod Twp.
New Jersey.....	Hoboken.....	Apr. 28, 4 p.m.....	Excav. cement curb and sidewalks, sewers, etc., Elysian sq. pk.....	James H. Londrigan, City Clerk.
Indiana.....	Anderson.....	Apr. 28, 10 a.m.....	Constructing 9 gravel roads, total length, 76,464 ft.....	Wm. T. Richards, County Auditor.
New York.....	Brooklyn.....	Apr. 28, 11 a.m.....	Regulating, grading, curbing and laying sidewalks.....	Bird S. Coler, Boro. President.
Ohio.....	Columbus.....	Apr. 28.....	Repeating with brick or block portions of several streets.....	E. W. Hirsch, Sec'y Bd. Pub. Serv.
New York.....	Geneva.....	Apr. 29.....	Paving Washington St. 30 ft. instead of 24 ft., as previous bids.....	Board of Public Works.
Maryland.....	Takoma Park.....	Apr. 29, 8 p.m.....	Laying 800 sq. yds. cement sidewalks.....	W. G. Platt, Mayor.
New Jersey.....	Hackettstown.....	Apr. 29, 2 p.m.....	Macadamizing public road, 45,341 ft. long, 2 twps.....	J. R. Thatcher, Dir. Bd. Freeholders.
Ohio.....	Youngstown.....	Apr. 30, noon.....	Improving Andrews ave.; repaving 3 other streets.....	W. H. McMillin, Clk. Bd. Pub. Serv.
Ohio.....	Cincinnati.....	Apr. 30, noon.....	Improving Polk Run road; spec. 841; \$1,000 check.....	Stanley Struble, Pres. Co. Comrs.
Indiana.....	Fowler.....	Apr. 30.....	Constructing seven gravel roads.....	Benton County Commissioners.
Hawaii.....	Lihue.....	May 1.....	Furn. traction engine and macadam traction cars, f.o.b. steamer.....	J. H. Moragne, Engr. Kauai County.
Wisconsin.....	Racine.....	May 1, 10 a.m.....	Paving sundry streets.....	P. H. Connolly, Chm. Bd. Pub. Wks.
South Dakota.....	Aberdeen.....	May 3.....	Constructing sidewalks on various streets.....	L. W. Raymond, City Auditor.
Indiana.....	Hartford City.....	May 3, 2 p.m.....	Constructing 5,552 ft. macadam road in Washington twp.....	Fred. Giddings, City Engineer.
Kansas.....	Atchison.....	May 3.....	Brick paving, 1,840 sq. yds.; cement curbing, 1,100 lin. ft.....	Stephen P. Corboy, County Auditor.
Indiana.....	Valparaiso.....	May 3, noon.....	Constructing 7 miles gravel road.....	Edw. G. Krahmer, County Auditor.
Minnesota.....	St. Paul.....	May 3, 10 a.m.....	Improving 3 roads.....	T. L. Thomas, County Auditor.
Indiana.....	Vernon.....	May 3, 11 a.m.....	Bldg. 1 1-2 miles pike road Lovell and 1 1-2 miles Geneva twp.....	W. W. Hollis, County Auditor.
Ohio.....	Chardon.....	May 3, 11 a.m.....	Grading, draining, etc., Big Hill on Claridon st. in village.....	W. H. Heiser, Clk. Bd. Pub. Service.
Ohio.....	Sidney.....	May 3, noon.....	Material and labor for paving 7 sts. and aves. with brick.....	Wm. H. Nichols, County Auditor.
Indiana.....	Danville.....	May 3.....	Constructing James Tod road, 12,144 ft. long, Center twp.....	S. B. Heddles, Chm. St. Ass'm't Com.
Wisconsin.....	Janesville.....	May 4, 2 p.m.....	Constructing cement curbing on Cherry st.....	Auditor Scott, c. o. County Com'rs.
Indiana.....	Vincennes.....	May 4.....	Constructing gravel roads, etc.....	Lemuel Shipman, County Auditor.
Indiana.....	Fowler.....	May 4, 1 p.m.....	Blue limestone paving, etc., 7 roads; cost, \$34,850.....	John B. Rudolph, Mayor.
Georgia.....	Gainesville.....	May 4, 8 p.m.....	Brick, block, bitulithic, etc., paving 17,000 sq. yds., granite curb	Peter M. Cook, County Auditor.
Indiana.....	Bloomfield.....	May 4, 2 p.m.....	Bldg. J. B. Young, also Balton gravel road, 2 twps.....	J. L. Ackerman, County Auditor.
Indiana.....	Monticello.....	May 4, noon.....	Bldg. Henry Shook gravel road in Union Township.....	W. H. Lucas, Village Clerk.
Ohio.....	Cadiz.....	May 5, noon.....	Brick paving, 8,048 sq. yds.; Riggs & Sherman Co., Toledo, E'grs.....	John C. Scott, Clk. Co. Com'rs.
Ohio.....	Columbus.....	May 5, noon.....	Macadamizing, etc., National road.....	Co. Clk. of Forsyth County.
North Carolina.....	Winston-Salem.....	May 5, 10 a.m.....	Constructing macadam road 5 miles long.....	Jesse M. Stone, County Auditor.
Indiana.....	Rushville.....	May 6, 2 p.m.....	Constructing macadam road.....	Bascom Sykes, City Engineer.
Virginia.....	Portsmouth.....	May 6.....	Furnishing 140,000 sidewalk paving brick; 6 samples by Apr. 30; price per M. f.o.b. cars or wharf.....	W. C. McFarland, County Auditor.
Ohio.....	Mt. Gilead.....	May 7, 11 a.m.....	Bldg. No. Bloomfield stone road Improvement No. 1.....	Benton County Commissioners.
Indiana.....	Fowler.....	May 7.....	Bldg. 6 miles of County road between Benton and Jasper Cos.....	Stanley Struble, Pres. Co. Comrs.
Ohio.....	Cincinnati.....	May 7, noon.....	Repairing Springfield twp., spec. 823, \$10,000 bond.....	E. P. Fitzgerald, Chm. Bd. Pub. Wks.
Wisconsin.....	Fond du Lac.....	May 8, 3 p.m.....	Bldg. cement pavements, curb and gutter, 2 streets.....	City Clerk.
Iowa.....	Cresco.....	May 10, 8 p.m.....	Brick paving, 9,000 sq. yds.; cement curbing.....	F. W. Raymond, City Auditor.
South Dakota.....	Aberdeen.....	May 10, 8 p.m.....	Brick, asphalt, creol. block, macadam, several sts.....	W. Hunter, Ch. Engr. P. & R.Ry.Co.
Pennsylvania.....	Philadelphia.....	May 11.....	Abolishing grade crossings in city.....	Wright Smith, City Engineer.
Alabama.....	Mobile.....	May 12.....	Creo. wood block paving, 90,000 sq. yds.; cement curb, 60,000 ft.	C. L. Straw, County Engineer.
Ohio.....	Paulding.....	May 14, noon.....	Grading, draining, culverting, macadamizing, 228,084 lin. ft., 12 sections, 6 roads, inc. stone approaches.....	Wm. F. Black, Clk. Co. Comrs.
Ohio.....	Cleveland.....	May 15, 11 a.m.....	Grading, draining, etc., Mayfield road No. 2.....	O. B. Olson, Clk. Bd. Supervisors.
South Dakota.....	Afton.....	May 15, noon.....	Regrading, 5 miles road; graveling, 10 miles.....	
<b>WATER SUPPLY</b>				
North Carolina.....	Waynesville.....	Apr. 22, noon.....	Erecting 500,000-gal. filter plant with coagulating basin and 250,000-gal. reservoir, all of rein. concrete.....	G. W. Maslin, Chm. W. W. Com.
Missouri.....	Kansas City.....	Apr. 22.....	Furn. gate valves of various sizes, f.o.b. cars Kansas City.....	Board Fire and Water Com'rs.
Pennsylvania.....	Lancaster.....	Apr. 22.....	Furn. supplies to May 1, 1910, inc. American lead, 4 to 24-in. pipe, 1-4, 1-2 and 1-in. brass ferrules; fire hydrants; 4 to 24-in. stop valves; castings; meters; hauling and laying pipe, etc.....	J. H. Rathfon, City Controller.
Pennsylvania.....	Altoona.....	Apr. 22, noon.....	Continuing construction of Lake Altoona, with accessories, inc. 360,000 cu. yds. embankment and 21,000 cu. yds. rubble concrete; \$1,000 check: Knight & Hopkins, Engrs., Rome, N. Y.....	H. K. McCauley, Chm. Water Bd.
Ohio.....	Lorain.....	Apr. 22.....	Furnishing and delivering one deep well pump.....	O. W. Thomas, Clk., Bd. Pub. Serv.
Pennsylvania.....	Hazleton.....	Apr. 22, noon.....	Bldg. dam and reservoir on Wolff's Run, near city; also for furnishing and laying, or laying only, 4 miles 16-in. c. i. pipe and 10 tons specials.....	P. F. Boyle, Pres. Diamond Wtr. Co.
Ohio.....	Put-in-Bay.....	Apr. 22, noon.....	Constructing water works system; C.E. DeWitt, C.E., Pt. Clinton	L. E. Schraidt, Village Clerk.
Ohio.....	Elyria.....	Apr. 22, noon.....	Furnishing water meters; also standard water pipe: 50 tons 4-in., 100 tons 6-in., 10 tons 8-in., 15 tons 12-in.....	Board of Public Service.



## BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
WATER SUPPLY—Continued				
Kentucky	Willow	Apr. 23	Constructing 3 cisterns.	U. S. Eng'r's Office, Cincinnati, O.
Utah	Salt Lake City	Apr. 23, 8 p.m.	Water main contracts for year; estimate, \$225,000.	L. C. Kelsey, City Engineer.
Minnesota	Bemidji	Apr. 26, 8 p.m.	Bldg. steel tower and 100,000-gal. steel tank.	M. D. Stoner, City Engineer.
Florida	Clearwater	Apr. 26, 7 p.m.	Constructing water works, Holmboe Co., Louisville, Ky., Engrs.	T. J. Sheridan, City Clerk.
Missouri	Sikeston	Apr. 26, 7:30 p.m.	Constructing water works system; \$500 check with bid.	M. G. Gresham, City Clerk.
Louisiana	New Orleans	Apr. 27, 3 p.m.	Furnishing brass goods for city.	Geo. G. Earl, Supt. Sew. & Wtr. Bd.
Pennsylvania	Ridgway	Apr. 27, 6 p.m.	Constructing 1,500,000-gal. rein. concrete reservoir.	F. W. Ward, Boro. Engr.
Indiana	South Bend	Apr. 27, 10 a.m.	Material and labor for bldg. 1,000,000-gal. rein. concrete reserv.	W. A. McInerney, Pres. Bd. Pub. Wks.
Illinois	Ottawa	Apr. 27, 5 p.m.	Furn. and laying, inc. trenching, etc., 1,400 ft. 4-in. standard c. i. pipe, weighing 22 lbs. per ft.; two 6x4 specials; two 4-in. gate valves; street boxes; 2 fire hydrants.	Fred. Wendel, City Clerk.
Illinois	Berwyn	Apr. 27, 8 p.m.	Laying c. i. water pipe in several streets.	John P. Coykendall, Sec'y Bd. Lo. Imp.
California	Oakland	Apr. 28, 11 a.m.	Labor and material for pipe system for salt-water high pressure fire system; \$20,000 check.	W. B. Fawcett, Sec'y Bd. Pub. Wks.
Illinois	Blue Island	Apr. 29, 8 p.m.	Material and labor for 70x26x12-ft. rein. concrete reservoir; steel tank set on existing brick tower, 20x50 ft.; well 1,800 ft. deep; J. W. Alvord & C. B. Burdick, Hartford bldg., Chicago.	F. Hohmann, City Clerk.
Pennsylvania	Catasauqua	Apr. 29	Constructing water works; whole or separate.	Thos. Jones, Chm. Fire & Wtr. Com.
Utah	Salt Lake City	Apr. 30	Bldg. screening tank and house at head of pipe line, City Creek.	Louis C. Kelsey, City Engineer.
Texas	Vernon	May 1	Constructing \$15,000 water works.	L. P. Bower, Mayor.
Oklahoma	Hugo	May 4, 8 p.m.	Material, labor, etc., for complete water system.	R. L. Jones, Mayor.
North Dakota	Velva	May 4, 8 p.m.	Constructing water main extensions; check, \$500.	O. Claussen, C.E., St. Paul, Minn.
Arizona	Bisbee	May 4, 7 p.m.	Furn. and erecting three 250,000-gal. each steel tanks.	Geo. S. Gage, City Clerk.
California	Petaluma	May 5, 7 p.m.	Furn. and install. pump. mach. for salt-water high-pressure sys.	City Clerk.
Texas	Denison	May 10, 8 p.m.	Constructing earth dam; 145,000 cu. yds. embankment.	Alex. W. Acheson, Mayor.
Texas	Galveston	May 12	Bldg. 8-in. c. i. pipe across ship channel, inc. 1,500 ft. submerged pipe, 42 in. below low tide, requiring 35,200 cu. yds. dredging; also 12,500 ft. shore pipe.	A. T. Dickey, City Engineer.
Kentucky	Madisonville	June 1, noon	Purchase of water works franchise.	Jas. L. Brown, City Clerk.
Philippine Is.	Manila	June 1, noon	Furnishing 7,000 tons c. i. pipe, hub and spigot; 56 tons 20-in. flexible joint and flange c. i. pipe; 2 tons flanged c. i. pipe; 200 tons c. i. specials; J. F. Chase, Ch. Engr. Dept. Sewers & Wtr.	H. L. Fischer, Sec'y Municipal Bd.
SEWERAGE				
Ohio	Youngstown	Apr. 22, noon	Sewering and repaving portion of E. Federal and Albert sts.	W. H. McMillin, Clk. Bd. Pub. Serv.
Ohio	Akron	Apr. 23	Constructing sewers portions Belmont ave. and Sherman st.	Ray F. Hamlin, Sec'y Bd. Pub. Serv.
Utah	Salt Lake City	Apr. 23, 8 p.m.	Bldg. pipe sewers in Sewer Extension No. 227, etc.	L. C. Kelsey, City Engineer.
Oklahoma	Enid	Apr. 23, noon	Constructing 3,300 ft. of storm sewer; 1,200 ft. 6 1-2-ft., 1,600 ft. 7 1-2-ft., 475 ft. 4-ft. vit., plain or rein. concrete sewer.	C. H. Sexton, City Engineer.
Indiana	Jeffersonville	Apr. 26	Bldg. 36 to 60-in. concrete trunk sewer; cost, \$51,000.	Board of Public Works.
Florida	Clearwater	Apr. 26, 7 p.m.	Constructing sewer system; Holmboe Co., Louisville, Ky., Engr.	T. J. Sheridan, City Clerk.
Dist. of Col'bia	Washington	Apr. 26, noon	Constructing sewers in Fourth st.; also Luzon ave. trunk sewer and sewer in valley north of R St.	Maj. W. V. Judson, Eng'r Com'r.
Ohio	Cincinnati	Apr. 27, noon	Furn. material and bldg. sewers and drains, 5 sts.; cost, \$5,296.	John J. Wenner, Clk. Bd. Pub. Serv.
Illinois	Berwyn	Apr. 27, 8 p.m.	Constructing vit. tile pipe sewers in 6 streets.	John F. Coykendall, Bd. L. Imp't.
New York	Binghamton	Apr. 28, 4 p.m.	Constructing sewers in 2 aves. and 2 sts.	John A. Giles, City Engineer.
South Carolina	Manning	Apr. 29	Bldg. 8,500 ft. 8-10-in. vit. pipe sewer, 15 manholes.	Lee & McLellan, C.E., Sumter.
New York	Gloversville	Apr. 30	Constructing 4,000 ft. 8 and 10-in. sewer pipe line.	Morrell Vrooman, City Engineer.
Alabama	Montgomery	May 3, noon	Constructing sanitary sewer on S. Lawrence and Maury sts.	Robert Tait, City Treasurer.
Ohio	Cleveland H'ghts.	May 3, noon	Bldg. sewers in No. Woodland road; also joint sewers.	Wm. H. Evers Eng. Co., Arcade Clvd.
New Jersey	Elizabeth	May 3, 8:30 p.m.	Labor and material for 350 ft. 12-in., 200 ft. 10-in. pipe sewer, 3 manholes, 3 basins, 40 ft. 10-in. culvert; eleven 10x6-in. connections; twelve 6x12-in. connections; 23 1-8 turns; 414 ft. 6-in. pipe to point 7 ft. below curb.	N. K. Thompson, Street Com'r.
New Jersey	Bradley Beach	May 3	Constructing septic system of sewage disposal.	The Mayor.
Wisconsin	Janesville	May 4, 2 p.m.	Constructing 3,940 ft. 8-in. pipe sewer.	S. B. Heddles, Chm. St. Ass. Com.
Ohio	Newburg	May 5, noon	Constructing sewers in Ingersoll road and other streets, jointly with village of Cleveland Heights.	E. T. Lawrence, Clerk of Council.
South Dakota	Plankinton	May 10, 8 p.m.	Constructing complete sewer system.	T. W. Traubman, Mayor.
Kansas	Lindsborg	May 10	Constructing 7 miles 8, 10, 12 and 15-in. sanitary sewers.	H. A. Rowland, McPherson, Engr.
Alabama	Mobile	May 12, noon	Furn. material and constructing 33,000 ft. 10 to 30-in. pipe sewers; 30,000 ft. 6-in. house connections, manholes, etc.	J. T. Schley, Pres. Bd. Pub. Wks.
South Dakota	Huron	May 14, 8 p.m.	Bldg. 2 main sewers; Loweth & Wolff, St. Paul, Minn., Engrs.	M. Schoenert, City Clerk.
Wisconsin	Oshkosh	May 15, 2 p.m.	Bldg. sewers in sundry streets.	W. A. Marden, Chm. Bd. Pub. Wks.
New York	Syracuse	May 18, noon	Constructing 2 1-3 miles main intercepting sewer from 9 to 33 inches in diameter; principal items are 90,000 cu. yds. excavation and 6,000 cu. yds. concrete; check, \$10,000.	Harry J. Hamlin, Sec'y Sewer Bd.
BRIDGES				
Indiana	Sullivan	Apr. 22, noon	Constructing 4 bridges.	Ben C. Crowder, County Auditor.
Nebraska	Pierce	Apr. 22	Constructing several bridges for County.	J. B. McDonald, County Clerk.
South Carolina	Spartanburg	Apr. 23	Constructing Enoree bridge over Enoree river.	D. M. Miles, County Supervisor.
Ontario	Guelph	Apr. 24, noon	Bldg. steel bridge, 82 1-2 ft. concrete abutments, River Speed.	James Hutcheon, Engineer.
South Carolina	Spartanburg	Apr. 24	Constructing Kilgore, Van Patton and Woodruff bridges.	D. M. Miles, County Supervisor.
Indiana	Richmond	Apr. 24	Constructing 3 new bridges for County, repairing 2.	Board of County Commissioners.
Iowa	Cedar Rapids	Apr. 24, 2 p.m.	Bldg. steel rein. concrete bridge, seven spans of 80 ft., 40 ft. wide, inc. two 5-ft. walks; removing old steel bridge, etc.	P. P. Smith, City Engineer.
New Brunswick	Fredericton	Apr. 25	Bldg. 4 metal spans, each 260 ft. long, pin-connection.	John Morrissey, Dept. Pub. Wks.
Virginia	Norfolk	Apr. 26, 12:30 p.m.	Bldg. rein. concrete bridge for Board of Control.	W. T. Brooke, City Engineer.
Illinois	Geneva	Apr. 26, 7:30 p.m.	Bldg. rein. concrete bridge over Fox river.	Foster Nelson, City Clerk.
Massachusetts	Newburyport	Apr. 27, 10 a.m.	Rebldg. old Chain Bridge over southerly arm of Merrimac river, inc. removing necessary portions and bldg. complete new anchorages, cables, steel stiffening trusses, towers, steel floor beams and wooden floor, etc., suspended span 226 ft. long.	James P. Hale, Clk. Essex Co. Comrs.
Illinois	Chicago	Apr. 28, noon	Furn. metal work for superstructures of 5 steel hwy. bridges.	I. J. Bryan, Clk. Sanitary Dist.
Ohio	Cincinnati	Apr. 30, noon	Bldg. concrete culvert on Springfield road, Spec. 863.	Fred. Dreihls, Clk. Co. Comrs.
Wisconsin	Superior	Apr. 30	Material and labor for bridge over river, inc. piers, bascule span.	John Kummer, Chm. Bd. Pub. Wks.
Oregon	Toledo	May 1	Rebldg. bridge over Lentz Slough at Waldport, bidders' plans.	County Clerk, Lincoln County.
Virginia	Richmond	May 1	Rebldg. steel or concrete bridge bet. Rich. and Manchester.	Joint Bridge Committee, Council.
Georgia	Savannah	May 3, noon	Bldg. rein. concrete locks and bridges, 2 canal outlets.	G. Reuben Butler, Clk. Co. Comrs.
Mississippi	Magnolia	May 3	Bldg. 3 steel bridges for Pike Co., Bd. Supervisors.	W. C. Vaught, Clk. Bd. Supervisors.
Pennsylvania	Wilkes-Barre	May 4, 2 p.m.	Cleaning well all iron and steel and removing scales, blisters and loose rust and thoroughly painting 13 bridges, 27 to 79 ft. long, paint to have 5 years' guarantee.	Jas. M. Norris, County Controller.
Iowa	New Hampton	May 4, 1 p.m.	Constructing 10 concrete bridges; entire or separate.	F. N. Lentz, County Auditor.
Ohio	Cincinnati	May 7, noon	Concrete bridge on Old State road in Miami twp.	Fred. Dreihls, County Clerk.
Ohio	Hamilton	May 8, 10 a.m.	Bldg. steel or rein. concrete bridge over Tallawanda Creek.	Jos. E. Brate, County Auditor.
Indiana	Wabash	May 10	Constructing \$1,600 bridge.	County Surveyor.
Ohio	Dayton	May 13, 11 a.m.	Bldg. self-closing bridge over M. & E. canal 50 ft. long and provide 40-ft. waterway and 10-ft. towing path, and have 20-ft. roadway and two 6-ft. walks, plank, steel, concrete or creodone block floor; model to accompany all bids.	Chas. W. Haines, Pres. Bd. Co. Comrs.
Ohio	Toledo	July 1, noon	Labor and material for rein. concrete arch bridge (except lift draw); also foundations, piers, apparatus, etc., for bridge over Maumee river at Main st.; check, \$50,000.	Reynold Voit, Sec'y Bd. Pub. Serv.

## BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
<b>LIGHTING AND ELECTRICITY</b>				
Kentucky.....	Bellevue.....	Apr. 22, 8 p.m.....	Franchise, 10-year, to erect poles, wire, etc., to furnish electricity for light, heat and power; \$2,000 check with bid; \$10,000 bond for contract; plans by Eng'r Hornung.....	Geo. Trunnel, Jr., City Clerk. Wm. Carroll, City Electrician.
Illinois.....	Chicago.....	Apr. 24.....	Furnishing 2,060,000 arc light carbons.....	
Wyoming.....	Ft. D. A. Russell.....	Apr. 24, 9:30 a.m.....	Bldg. and remodeling electric light system, inc. furn. all watt meters and transformers; bldg. sub station, wiring, arc lamps.....	Capt. V. K. Hart, U. S. A., Cheyenne. Charles E. Bolling, City Engineer.
Virginia.....	Richmond.....	Apr. 27, 5 p.m.....	Constructing electric light and power plant.....	James H. Londrigan, City Clerk.
New Jersey.....	Hoboken.....	Apr. 28, 4 p.m.....	Furn. electric arc, gas, hydro-carbon or other lights and proper care, lighting and extinguishing same, 1, 3 and 5 years.....	Board of Public Works. Joseph Oliver, Mayor. W. P. Morrison, City Engineer. James Knox Taylor, Super. Arch. Thos. J. Jarvis, Chm. Ex. Com. City Clerk. W. A. McCalhoun, Mgr. Light Co.
Indiana.....	Vincennes.....	Apr. 29.....	Street lighting contract for 10 years, from Apr. 29, 1910; bidders must build power plant and operate 263 arc lights of 2,000 c.p. Supply of underground cable.....	
Ontario.....	Toronto.....	Apr. 30, noon.....	Drilling a gas well for city.....	
Alberta.....	Medicine Hat.....	Apr. 30.....	Bronze railings and lamp standards for east front of Treasury Bldg. power house and infirmary at Teachers' Training School.....	
Dist. of Col'bia.....	Washington.....	Apr. 30, 3 p.m.....	Gas franchise from city.....	
North Carolina.....	Greenville.....	May 4.....	Furn. engines, boilers, etc., and installing 15-ton ice plant.....	A. L. Barbur, City Auditor.
California.....	Upland.....	May 10.....	Lighting sts., aves., bldgs. and public places with incandescent lights for 3 or 5 years; also bldgs. with gas, etc.....	S. G. Gregg, City Clerk.
Tennessee.....	Ripley.....	May 10.....	Constructing extension to municipal electric light plant.....	R. T. Michener, Village Clerk.
Oregon.....	Portland.....	May 14.....	Lighting village over 4,000 with gas or electricity.....	Board of Public Works.
Indiana.....	Rushville.....	May 14, 7:30 p.m.....	Lighting sts. at expiration of existing contract Apr. 29, 1910.....	
Ohio.....	Bridgeport.....	June 1.....		
Indiana.....	Vincennes.....	June 8.....		
<b>MISCELLANEOUS</b>				
Michigan.....	Grand Rapids.....	Apr. 22, 8 p.m.....	Constructing dock line wall and excavating in river.....	S. A. Freshney, Bd. Pub. Wks.
Pennsylvania.....	Wilkes-Barre.....	Apr. 22.....	Constructing fire engine house.....	Fred. H. Gates, City Clerk.
West Virginia.....	Wheeling.....	Apr. 23, 11 a.m.....	Furnishing 9,000 bbls. Portland cement Dam No. 26, Ohio river.....	Capt. F. W. Alstaetter, U.S. Eng. Corp.
Ohio.....	Cincinnati.....	Apr. 23.....	Constructing Lock No. 13 on Kentucky river at River Shoals, 375 to 400 ft. long; cost, \$325,000, inc. coffer dam and excav. Constructing Schenectady County Court House.....	U. S. Engr. Office. W. L. Stoddart, Arch., 31 Un. Sq., N. Y.
New York.....	Schenectady.....	Apr. 26, 2 p.m.....		
Dist. of Col'bia.....	Washington.....	Apr. 26.....	Furn. 40,000 ft. fire hose, Class 7; Isth. Canal Circ. 501.....	Capt. F. C. Boggs, Isthmian Can. Com.
Brit. Columbia.....	Prince Rupert.....	Apr. 27.....	Bldg. rein. concrete wharf with timber superstructure.....	Deft. Pub. Wks., Victoria.
Saskatchewan.....	Saskatoon.....	Apr. 28, 5 p.m.....	Bldg. brick, steel or concrete smokestack, 100 ft. high, 66 in. inside diam.; smoke connection; bricking in 2 boilers.....	J. H. Truesdale, City Clerk.
New Jersey.....	Hoboken.....	Apr. 28, 4 p.m.....	Bldg. public comfort and storage house, tool house, etc.....	James H. Londrigan, City Clerk.
Iowa.....	Des Moines.....	Apr. 29, noon.....	Bldg. steel fire-proof grand stand, complete; also separate bids on grading 20,000 yds.; brick work, 800 M.; cut stone, 1,140 cu. ft.; rein. concrete floors, 80,000 cu. ft.; cement walks and curb, 80,000 ft.; steel work, 977 tons.....	Oliver O. Smith, Architect. Hook & Rogers, Trust Bldg., Char'l'e.
North Carolina.....	Durham.....	Apr. 30.....	Erecting municipal bldg. and academy of music.....	J. H. Weisner, City Clerk.
North Dakota.....	Ludden.....	May 1.....	Furn. hose cart; also 500 ft. fire hose.....	W. B. Fawcett, Sec'y Bd. Pub. Wks.
California.....	Oakland.....	May 1.....	Removal of garbage to sea; contract now held by Wall Bros.....	
Texas.....	Houston.....	May 1.....	Improving, etc., San Jacinto State Park, inc. wharf and pagoda and keeper's reinforced concrete residence.....	W. C. Day, care Un. Bk. & Trus. Co.
South Carolina.....	Charleston.....	May 3, noon.....	Constructing 4,080 ft. concrete retaining wall and filling 670,000 cu. yds. behind same with material dredged from river.....	J. H. Dingle, City Engineer.
Ohio.....	Columbus.....	May 3, 11 a.m.....	Erecting front addition to Court House at Waverly.....	C. E. Emory, Clk. Co. Comrs.
Ohio.....	Bryan.....	May 3, 11 a.m.....	Furnishing maps and plats of County.....	R. H. Weaver, County Auditor.
Delaware.....	Wilmington.....	May 3.....	Collection and removal of garbage, 4 districts, one or more.....	Board of Health.
New Jersey.....	Burlington.....	May 4, 8 p.m.....	Furn. 1,200 ft. double-jacket, rubber-lined cotton fire hose.....	C. Earl Hopkins, Chm. Com. Fire.
Indiana.....	Vincennes.....	May 4, 2 p.m.....	Erecting 2 Fire Department buildings; J. W. Gaddis, Architect.....	C. L. V. Tucker, City Clerk.
Illinois.....	Chicago.....	May 5, noon.....	Excavating a channel, bridge work, etc., No. Shore Channel.....	I. J. Bryan, Clk. Sanitary Dist.
Louisiana.....	New Orleans.....	May 11, 7:30 p.m.....	Fabrication and erection of structural steel and cast-iron for additions to three steel sheds on wharves; deposit, \$1,000.....	Hugh McCloskey, Pres. Port Comrs
West Virginia.....	Wheeling.....	May 14, 11 a.m.....	Furnishing, etc., 13,000 bbls. Amer. Portland cement, Dam 19.....	Capt. F. W. Alstaetter, Eng'r Corps
Hawaii.....	Honolulu.....	May 14, noon.....	Furn. 25,000 bbls. Portland cement.....	E. E. Winslow, Eng. Corps, U. S. A.
Ohio.....	Columbus.....	July 15, noon.....	Bldg. concrete retaining wall; Contract No. 18, inc. 800 cu. yds. excav., 765 cu. yds. loam, 1 acre seeding, 220 sq. yds. sodding, 800 cu. yds. concrete, 2,000 lbs. twisted steel rods.....	E. W. Hirsch, Sec'y Bd. Pub. Serv.
Illinois.....	Chicago.....	Sept. 15.....	Furn. voting machines up to \$400,000 value.....	Election Commissioners.

## STREET IMPROVEMENTS

**Bessemer, Ala.**—Bids have been ordered for paving work on avenues and streets, to be opened in about ten days.

**Birmingham, Ala.**—Jefferson County is considering the construction of 5.3 miles of road from Wylam to Elbow.

**Union Springs, Ala.**—City has selected Engineer Brown, Morristown, Tenn., to make surveys preliminary to improvement of roads; first contract will be let for 10 miles; \$10,000 bonds have been voted.

**Colusa, Cal.**—Colusa County will vote on a good road bond issue.—F. W. Schultz, of Arbuckle; H. W. Manor, of Williams, and G. P. Ahlf, of Colusa, Committee.

**Ross, Cal.**—City Trustees will issue \$50,000 bonds for road purposes.

**Sacramento, Cal.**—Mayor C. L. White is advocating a system of street improvements that involves appropriating 16 ft. of present street width for park purposes; plans will be tried on G, I and Q streets.

**Sacramento, Cal.**—The Board of Supervisors has received a petition for a new road to extend from the lower Stockton to the Riverside River.—C. K. Phinney, County Surveyor.

**San Francisco, Cal.**—The Street Committee will recommend the paving of Second and Townsend Sts. with basalt blocks.

**San Leandro, Cal.**—San Leandro is ready to join with the county in securing the widening of East Fourteenth street and its continuation to Hayward avenue to a uniform width from Oakland through this place to Hayward.

**Woodland, Cal.**—The Board of Supervisors is considering the opening of the street leading from the Wenten road to the main entrance of the State Farm.

**Washington, D. C.**—Engineer of Highway C. B. Hunt has presented to Engineer Commissioner W. V. Judson a schedule of streets to be paved with asphalt or asphalt block during the year; plans call for an expenditure of \$130,000 for new asphalt

pavements, covering about 65,000 sq. yds. of roadway and the paving of about 30 squares in different sections of the city; bids will be received in a short time.

**Ocala, Fla.**—Council has decided to pave North Magnolia street with vitrified brick.

**Tampa, Fla.**—Citizens will vote May 18 on \$82,500 bonds for completing paving in old territory and \$50,000 for paving in new territory.

**Athens, Ga.**—County Commissioners are considering the paving of Oconee street.

**Atlanta, Ga.**—Council has adopted resolutions calling for pavement of Decatur and Marietta streets with wood blocks; \$20,000 is available.—R. M. Clayton, City Engineer.

**Clarksburg, Ga.**—Citizens have voted \$8,000 bonds for street improvements.—I. H. Sutton, City Clerk.

**Macon, Ga.**—Council is considering paving of parks on Poplar street.

**Rome, Ga.**—Floyd County citizens will vote in June on \$200,000 bonds for road improvements.

**Valdosta, Ga.**—Citizens have voted \$50,000 for laying 15 miles of cement sidewalks and other improvements.

**East St. Louis, Ill.**—Council is considering laying of granitoid sidewalks on Baugh avenue.

**Jacksonville, Ill.**—Council is considering paving of College street; cost to city, \$3,758.25; and Prairie street also; cost, \$4,824.27.

**Newman, Ill.**—Citizens have voted to construct and pave with brick two miles of roads.

**Waukegan, Ill.**—Council has passed an ordinance authorizing the construction of cement sidewalks on portions of Archer avenue.—Alderman J. F. Bidinger, City Clerk Pro Tem.

**Crawfordsville, Ind.**—Bids are being received for the construction of the Mill Place boulevard and the improvement of several streets.—H. B. Hulett, City Clerk.

**Elkhart, Ind.**—The Board of Public Works

is considering the paving of Princeton street a distance of about half a mile.

**Indianapolis, Ind.**—An oiled boulevard has been promised property owners along the Crawfordsville road west from the Emrichville bridge provided they improve their places by planting trees and keeping their fences in repair; proposition has been made to them by C. G. Fisher, president of the Motor Speedway Company, which is building an automobile race course west of the city.

**Indianapolis, Ind.**—The Board of Works has adopted resolutions for cement walks on Carson, New York and Davidson streets and Commerce avenue.

**Indianapolis, Ind.**—The Board of Public Works is considering the improvement of Blackford, Prospect and Thirty-third streets, Keystone and Garfield avenues.

**Plymouth, Ind.**—City will lay two miles of street paving this year with Toston brick.

**Des Moines, Ia.**—Council is considering the widening and straightening of Seventh street.

**Des Moines, Ia.**—Commissioner of Streets John MacVicar has presented 134 resolutions ordering construction of walks in every part of the city; total will be about 12 miles.

**Atchison, Kan.**—All bids opened on April 5 for paving Spring street with brick, about 6,222 square yards, have been rejected, as too high, and new bids will be received; the lowest bid was that of the Atchison Paving Brick Co. at \$19,671.—Fred Giddings, City Engineer.

**Leavenworth, Kan.**—Bids will be received in about 30 days for 30,000 square yards of oiled macadam and 20,000 square yards of brick pavement; bids will also be received in about 15 days for 30,000 feet of artificial stone curbing and for regreasing and paving Seventh street from Olive to Short street.—J. H. Kirmeyer, City Clerk.

**Lexington, Kv.**—The Board of Public Works has decided to improve and repair



fourteen streets; bids will be advertised soon.

**Lexington, Ky.**—Council has passed an ordinance authorizing the Mayor to advertise for bids on five carloads of brick and 5000 tons of cracked rock; brick are not to cost more than \$19.50 a thousand.

**Lexington, Ky.**—Council is considering improvement of College View, Clay and Pratt avenues.

**New Orleans, La.**—The Finance Committee has given favorable report to petition for sidewalks in Calhoun street and the paving of Franklin street.

**Baltimore, Md.**—The Board of Public Improvements has approved ordinances for opening of Twenty-fifth and Homestead streets.

**Cumberland, Md.**—Council is considering the paving of Springvale street and portions of Bedford, Fayette and Paca streets.

**Boston, Mass.**—Council has passed proposed \$989,500 Allan bill; of this amount, \$500,000 is for the laying out and construction of highways.

**Lowell, Mass.**—City is considering paving of Merrimack bridge and Middlesex streets; cost, \$64,600.

**Lynn, Mass.**—The Committee on Streets is considering the paving of Mason street and sidewalks on various other streets.

**Malden, Mass.**—Council is considering ordinance ordering that \$10,000 be borrowed for the building of new streets and sidewalks.

**Spencer, Mass.**—Town has appropriated \$3,300 for a new steam roller.

**Detroit, Mich.**—Council has directed Department of Public Works to advertise for bids for paving Agnes avenue with cedar blocks on concrete foundation, with Medina, Berea or other approved curbing; estimated cost, \$4,644; also for paving an alley with vitrified brick on concrete foundation.—J. J. Haarer, Commissioner.

**Ludington, Mich.**—City has decided to pave three or four streets, including 14 blocks, tar macadam pavement, cement curb and gutter.—S. G. Martin, City Clerk.

**Port Huron, Mich.**—City will construct about 10,000 square yards brick paving.—W. W. Phelps, City Engineer.

**Duluth, Minn.**—Council has ordered the graveling and grading of Lewis and Columbus streets.

**Laurel, Miss.**—Bids will be received May 4 on \$10,000 bonds for street improvements.

**Lexington, Miss.**—The Board of Aldermen is considering a petition for a change from the old-fashioned board sidewalks to modern cement walks.

**Prentiss, Miss.**—Supervisors of Jefferson Davis County have sold \$20,000 road bonds.

**Nevada, Mo.**—Council has decided to improve Walnut, Cedar and Main Sts. with vitrified brick.—S. L. Higgins, City Clerk.

**Benson, Neb.**—City is considering the paving of streets.

**Elizabeth, N. J.**—Council has decided to pave Roosevelt street with trap rock pavement.—N. K. Thompson, Street Commissioner.

**Lyndhurst, N. J.**—The Berge County Freeholders have decided to make county roads of the Passaic River road from Belleville Turnpike to Carlton Hill and other thoroughfares of equal importance in different parts of the county. Freeholders Henderson, Cluss, Conklin, Galloway, Hecker, May and Widdess have been appointed as a committee to take the matter up.

**Merchantville, N. J.**—Council is considering an ordinance making it compulsory for every property owner to lay a stone or cement curb.

**Mount Holly, N. J.**—Burlington County Board of Freeholders is considering a proposition already approved by the State Road Commissioner to bond the County for \$150,000 to build some improved roads; roads desired are from Gardner's Corner to Abseon, Bordentown to Florence, Sayrestown to Vincentown and then on to Pemberton, Evesboro to Kresson, Mount Holly to Lumberton, and Mount Laurel to Cox's Corner, aggregating 26½ miles.

**Newark, N. J.**—The Board of Street and Water Commissioners has ordered the paving of South Sixteenth street; also is considering the paving of Fifteenth and New York avenues, South Thirteenth and Nevada streets.—William E. Greathead, Clerk Board.

**South Orange, N. J.**—State Senate has passed a bill to allow village to issue bonds for the paving of all the village streets.

**Stanhope, N. J.**—Steps have been taken by Council to have Main street taken over by the county and improved under the State road act.

**Trenton, N. J.**—Council has ordered the paving of Olden avenue from the Assanpink Creek to North Clinton avenue to be paved with the material known as R. Y. Filbert improved waterproof Filbertine paving cement.—H. B. Salter, City Clerk.

**Albany, N. Y.**—Council is considering the paving of Slengerland, Montgomery, Mar-

shall and State streets and Myrtle avenue.—F. U. Bresce, Clerk.

**Buffalo, N. Y.**—City has sold \$300,000 grade crossing bonds to R. L. Day & Co. and Estabrook & Co. of New York City, on their combined bid of \$103,683.

**Buffalo, N. Y.**—Council Committee has appropriated \$180,000 for the maintaining and repairing of asphalt streets.

**Freemansburg, N. Y.**—Borough is considering improvement of Main street.

**Fulton, N. Y.**—Council has advertised for bids for \$34,000 bonds; proceeds will be used in paving Oneida, South First, Broadway, Hannibal, West Third and Plank Road streets.

**Great Neck, L. I., N. Y.**—Town is considering macadamizing of Wood road, Maple street, Beach road and Bay View avenue; cost, \$22,000.

**New Hyde Park, L. I., N. Y.**—Town has appropriated \$12,000 for the macadamizing of the road from Tanners Pond to New Hyde Park.

**Port Washington, L. I., N. Y.**—Town has made the following appropriations for street improvements: Sixth avenue, \$8,000; Prospect avenue, \$9,000; Shore road, \$20,000, and Stonington road, \$10,000.

**Rochester, N. Y.**—Council has passed ordinances providing for the following paving: Flint street, \$25,000; Flower City Park, \$24,000; Edward street, \$8,000, and sidewalks on Mohawk, North and Goodman streets.

**Rockport, N. Y.**—Village Trustees have decided to macadamize Monroe avenue.

**Roslyn, L. I., N. Y.**—Town is considering macadamizing of Garden street; cost, \$10,000.

**Schenectady, N. Y.**—Property owners in Campbell street are urging the paving of that thoroughfare.

**Thomaston, L. I., N. Y.**—Town has appropriated \$17,000 for the macadamizing of Grace avenue and Schenck's lane.

**Westbury, L. I., N. Y.**—Town will macadamize Maple avenue at a cost of \$12,000.

**White Plains, N. Y.**—The State Highway Commissioners and the Board of Supervisors have arranged plans for the routes of the two new State highways which are soon to be built by the counties in conjunction with the State; one of the highways will be built on the east side of the county and the other on the west side, and it is the purpose of the Commission to utilize as many of the roads already existing as possible; on the west side of the county the Albany Post road will be improved from Yonkers to Peekskill; other trunk highway begins at Mount Vernon and will include the California road, in the town of East Chester, and the Saw Mill River road, running from Tuckahoe to White Plains; from White Plains the route leads to the northern section of the county, forming a junction near Peekskill with the Albany Post road.—Supervisor S. Fletcher Allen, of this village, Chairman of the Good Roads Committee.

**Charlotte, N. C.**—City will grade and pave sidewalks on Tryon and Trade streets; contract will be soon awarded.—A. H. Wearn, City Clerk.

**Winston-Salem, N. C.**—Forsythe County Commissioners are considering construction of macadam road; distance, five miles.

**Akron, O.**—The Board of Service has passed resolutions for the paving of Quarry, Sebree, Cherry and Sumner streets and Glendale avenue.

**Barberton, O.**—Bids will soon be received for paving Baird and Wooster avenues; cost, \$30,000.

**Cincinnati, O.**—City Engineer Sundmaker has estimated cost of improving Probasco street with macadam at \$11,220.10 and Lillard avenue with macadam, \$56,161.50.

**Cincinnati, O.**—The Board of Public Service is considering the improvement of Main from Fourth to Court streets.

**Columbus, O.**—The Board of Public Service is considering the improvement of about eleven streets; Board has also decided to ask Council for the improvement of Frankfort, Greenwood, Shumel, Wheatland, Oakley, Gates, Gill, Cherry, Gibbons, Neil and Grassville streets.

**Columbus, O.**—Franklin County will, before the close of the year, have completed the repair and construction of new roads a distance of 65½ miles, provided the County Surveyor is given a force of men sufficient to make the necessary grades and specifications; estimated cost of these roads is \$271,000.

**Dayton, O.**—City Engineer Cellarius has submitted to the Service Board estimates for the improvement of various streets as follows: Cement sidewalks on the following: Alberta, 12 cents per square foot; Champa avenue, 12 cents; Bacon street, 12 cents; for curbing and guttering on Rockwood avenue, \$1,612; for grading and graveling of Drury, \$2,134.60. Paving estimates have been submitted as follows: Alley east of Wayne avenue, asphalt, \$1,052.61; brick, \$907.80; Wyoming street, asphalt, \$7,016.16; brick, \$5,403.51; Forest avenue, asphalt, \$30,026; brick, \$25,402.

**Dayton, O.**—Council has decided to improve Xenia avenue from St. Paul to Bowen avenue.—C. P. Floyd, Clerk.

**Defiance, O.**—Council is considering the paving of Jefferson and Second streets; also granted the paving of North Clinton and Kalston avenues.

**Franklin, O.**—Council has decided to pave Main street; bids will be advertised at once.

**Hamilton, O.**—The Board of Public Works has decided to pave James, Barton, Herkimer and other streets; cost, \$140,000.

**Ironton, O.**—County Commissioners have sold \$50,000 road bonds to Seasongood & Mayer, of Cincinnati.

**Lima, O.**—Council is considering the paving of North Collet, Elm and Metcalf streets and Atlantic avenue.

**Norwalk, O.**—Council has received a petition for the improvement of Elm and Milan streets.

**Youngstown, O.**—Bids will be received May 10, 2 p. m., for \$22,000 Crossman avenue extension and improvement bonds.—W. I. Davies, City Auditor.

**Weatherford, Okla.**—City is considering \$20,000 bond issue for street improvements.

**Klamath, Ore.**—Citizens will soon vote on new city charter, which provides for the paving of Main street and the installation of a sewerage system.

**Beaver Falls, Pa.**—Council is considering the paving of Seventh street, from Seventh to Ninth avenues.

**Cambridge, Pa.**—Council is considering the paving of Merchant street.

**Clintonville, Pa.**—County Commissioners are considering a petition for a State-aid road, 5720 ft. long, in this village.

**Conemaugh, Pa.**—Council has decided to expend about \$25,000 in paving Main, Chestnut, Locust, Second, Third and Fourth streets.

**Finleyville, Pa.**—County Commissioners have received a petition from property owners of North Strabane Township asking that a brick road be constructed from the Hill Church to Eighty-four, a distance of 5½ miles.

**Gallitzin, Pa.**—Council is considering the paving of Main street, between the east-bound and west-bound depots of the Pennsylvania Railroad.

**Greensburg, Pa.**—Washington County Commissioners have sold \$100,000 road bond issue.

**Greenville, Pa.**—The Board of Trade is considering the paving of more streets.

**Harrisburg, Pa.**—Council is considering the paving of Eighteenth street.

**Indiana, Pa.**—Council has decided to postpone paving the cross streets until next year and to devote the present season to fixing up sewers, gas and water mains.

**Media, Pa.**—Council is considering the paving of Front street with brick and the placing of stone on Monroe street.

**New Castle, Pa.**—Council passed an ordinance for 3,000 square yards of brick paving, with sandstone curb and concrete base, on Boyle street.—C. H. Milholland, City Engineer.

**Obiopolis, Pa.**—Borough Council is considering ordinance for the construction of a cement sidewalk on Commercial street.—J. A. Stark, Clerk.

**Phoenixville, Pa.**—Council has decided to pave Bridge street, from Main, west, as far as the \$50,000 bond issue will provide the funds; also on brick and cement as the material for paving Main to Gay, Church to Gay and from Church street, west.

**Pittsburg, Pa.**—County Road Engineer G. T. Barnsley expects to build 300 miles of new road this year in Allegheny County.

**Pottstown, Pa.**—Montgomery County Commissioners have decided to macadamize pike from the eastern borough limits of this city to Sanatoya.

**Reading, Pa.**—Council is considering the paving of Benjamin, Chestnut from Fourth to Seventh, Green, Sixth, Fourth and Pine streets and the improvement of various other streets.

**Scranton, Pa.**—Council is considering the grading of Wyoming avenue, extension of Wayne street and the laying of sidewalks on Capouse avenue.

**Sewickley, Pa.**—Citizens on Try street are urging the widening of that thoroughfare.

**West Chester, Pa.**—State Highway Commissioner Hunter has notified citizens of Southern Chester County that he would macadamize some of the roads in that section this year.

**Westmont, Pa.**—Council is considering the paving of several streets; considerable paving will be done this summer.

**Wilkes-Barre, Pa.**—Council is considering an ordinance authorizing property owners on all paved streets to lay sidewalks.

**Williamsport, Pa.**—Council has decided to resurface West Fourth street with brick.

**Windber, Pa.**—Council is considering the paving of Seventeenth street.

**Chattanooga, Tenn.**—County Court has appropriated \$50,000 for the construction of a boulevard from the heart of the city

to the government roads in Chickamauga Park; road will be about ten miles long and will be one of the finest in the South.

**Chattanooga, Tenn.**—The Central Improvement Company will expend about \$15,000 for streets, sidewalks and sewers.

**Chattanooga, Tenn.**—Hamilton County Court has voted a \$50,000 bond issue for construction of Boynton boulevard.

**Jackson, Tenn.**—County Court has voted to grade three miles beyond the gravel roads and to construct one-half mile of road on each of the roads of the new compound composed of sand and clay.

**Knoxville, Tenn.**—Citizens are urging the paving of territory extending from the Church avenue bridge to the corporation line.—Alderman J. E. McMillan is interested.

**Knoxville, Tenn.**—Oak Avenue Improvement District will issue \$5,400 of bonds for street improvements.—Jno. M. Brooks, Mayor.

**Madisonville, Tenn.**—Monroe County will vote September 14 on \$100,000 bonds for road construction.—W. A. Gormley, Clerk.

**McMinnville, Tenn.**—Warren County will soon begin proposed road construction; \$150,000 bonds have been issued.

**Newport, Tenn.**—Cocke County has not yet selected Engineer for the improvement of various roads; preliminary surveys are being made.—B. W. Hooper, Secretary Court.

**Boston, Tex.**—Bowie County citizens have voted \$250,000 bonds for road improvements.

**Dallas, Tex.**—Citizens on Lane, Prather and Commerce streets have petitioned for permanent paving.

**El Paso, Tex.**—Bids will be received by the Commissioners' Court May 1 for \$275,000 road and bridge bonds.—Albert E. Eylar, County Judge.

**Georgetown, Tex.**—Williamson County will expend about \$100,000 in constructing macadam roads.

**Houston, Tex.**—City forces will pave 35 miles of streets with gravel and shell.—H. B. Rice, Mayor.

**Weatherford, Tex.**—City will pave various streets with bitulithic.—H. L. Mosely, Mayor.

**Salt Lake City, Utah.**—City will undertake the following paving extensions this year: North State, First North and West Canyon streets, \$7,237.74; Twelfth East, \$30,600.73; Third West, \$68,660.22; East First South, \$14,110.46; Third South, \$50,201.21; A street, \$13,829.84; resurfacing Main street, \$48,479.89; B street, \$4,899.78; G street, \$292.80; Exchange and Cactus, \$12,590.71; First avenue, \$77,290.93; Seventh East, \$32,154.98; West Temple and Fifth South, \$84,264.67; paving Fourth East, \$20,772.06; paving Third South, \$147,000; also sidewalk extension as follows: First North, \$666; between South Temple and Thirteenth East and Ninth South and city limits on south, \$181,264.71; Third North and First West, \$107,302.39; South Temple, Tenth West, Fourth North and Third West, \$91,282.98; North Main street, \$5,033.94; replacing defective walks, East First South and Fifth East, \$2,321.52, and curbing and guttering North and South streets, \$27,459.25.—L. C. Kelsey, City Engineer.

**Alexandria, Va.**—Alexandria County, Richmond, Fredericksburg & Potomac, Washington, Southern & Washington and Alexandria & Mount Vernon electric railway companies will jointly pave King street from western city limits to union passenger railway station with vitrified brick, at a cost of \$17,000 and under the supervision of County Engineer Garrett, Clarendon, Va.

**Charlotte Court House, Va.**—Bids will be received May 10 for \$40,000 bonds for the improvement of public roads.—B. P. Eggleston, President Board County Supervisors.

**Lynchburg, Va.**—City is considering \$10,000 bond issue for street improvements.—H. L. Shaner, City Engineer.

**Manchester, Va.**—City will issue \$40,000 bonds for street improvements.

**Norfolk, Va.**—The Public Improvement Committee has approved a resolution asking \$3,000 for the purchase of a road roller and road scraper.

**Spottsylvania, Va.**—Spottsylvania County citizens will vote May 18 on \$100,000 bonds—\$60,000 for road improvements in Courtland district and \$40,000 for road improvements in Chancellor district.—John E. Mason, Judge of Circuit Court.

**Tacoma, Wash.**—Council is considering improvement of North Twenty-sixth street and Pacific avenue.

**Walla Walla, Wash.**—The Street Committee has recommended the macadamizing of Long and the paving of Covelle streets.

**Bridgeport, W. Va.**—Council has decided to repave Lincoln avenue from Main street to the bridge and from the bridge to the C. O. crossing; cost \$500.

**Middlebourne, W. Va.**—City will ask for bids soon for the paving of about one mile of streets.—J. W. Duty, Clerk.

**Parkersburg, W. Va.**—The Board of Af-

fairs is considering better sidewalk construction.

**Parkersburg, W. Va.**—The Parkersburg-Williamstown Boulevard Association has been organized to construct road between Parkersburg and Williamstown; distance, 11 miles; total cost, \$110,000.—O. S. Hawkins, Secretary; J. Madison Jackson, Consulting Engineer.

**Beloit, Wis.**—The Board of Public Works has prepared estimate on the cost of improving Nelson, Dewey and Lawrence streets.

**Beloit, Wis.**—Council has decided to improve Portland avenue by a uniform cement curbing and gutter, and that the main part be covered with taroid, asphalt or macadam.—Robert Caldwell, City Engineer.

**Burlington, Wis.**—City is considering the paving of Geneva street; Board of Public Works has estimated cost at \$1.75 per square yard for paving and 40 cents per running foot for cement curb.

**Madison, Wis.**—The Street Committee has recommended contracts for the macadam work and drains on Blount, Murray and Spooner streets and East Washington avenue be let separately.

**Milwaukee, Wis.**—The Board of Public Works has recommended the following street improvement work: Jefferson, Juneau, Knapp, Franklin, Twelfth, State, Sixth, Seventh, Windlake avenue and Fifth with asphalt; Ogden, Fourth, Virginia, Central avenue, Thirteenth, Forest Home avenue, First avenue and Kinnickinnic avenue with brick; Becher and Greenfield avenues with sandstone; cost, \$500,000.—C. J. Poetsch, City Engineer.

**Oshkosh, Wis.**—The Board of Public Works has decided to receive bids for paving South Main street with cedar block on concrete foundation; estimated cost, \$12,347.

**Racine, Wis.**—Council is considering the paving of Lake avenue, grading Hill street and paving Wisconsin street.

#### BIDS RECEIVED AND CONTRACTS AWARDED

**Los Angeles, Cal.**—Eight bids were opened by the Supervisors, Mar. 29, for the improvement of El Monte road under the plans of the Highway Commission. Frank Gillespie was the lowest bidder, at \$22,906.

**Sacramento, Cal.**—The Advisory Committee has recommended the awarding of contracts for the Jackson and Placerville roads to the McGilivray Company. The bid of the company for the Jackson road was \$47,386.44 when the amount allowed under the bond issue was but \$42,000 for this road. The District Attorney in an opinion held that only the \$42,000 could be used from the bond fund for the road, but that the deficit could be made up from the Road Fund. The company's bid for the Placerville road was considerably less than the amount allowed for that road, but the excess must revert to the Sinking Fund, was the opinion of Wachhorst. The bid for the Placerville road was \$29,503.39, and the sum allowed in the bonds, \$33,000.

**Hartford, Conn.**—The contract for paving Capitol Avenue, from Park River to Laurel Street, with asphalt has been awarded to the Southern New England Paving Co., at \$5,783, the detailed prices being as follows: Asphalt, \$1.65 per square yard; excavating, 67 cents per cubic yard; concrete foundation, \$6.35 per cubic yard.

**Augusta, Ga.**—The cement sidewalk contract has been awarded to A. H. McDaniel, who put in a bid to do the work for 10 7-8 cents per square foot, as against 12 cents paid last year.

The curbing contract was awarded to W. F. Bowe, for 34 1-2 cents per linear foot, and 45 cents per round foot.

**Dublin, Ga.**—Council has signed a contract with the Georgia Hydraulic Stone Works, city, to rebuild what tile sidewalks have been laid in the business section of the city and to lay new walks where none have been; contract calls for the payment

of \$6,310.25; work is to be completed by June 30.

**Aurora, Ill.**—The McCarthy Improvement Company of Davenport has been awarded contract to lay 25,000 yards of brick paving; block brick manufactured by the Barr Block Company of Streator, Ill., will be used in this contract.

**East St. Louis, Ill.**—The Board of Local Improvements has accepted the bid of John and P. Keeley, of East St. Louis, for making improvements in Baugh avenue for \$3,655.22 as the lowest regular bid of a responsible bidder, F. B. Hanna, Clerk.

**Bluffton, Ind.**—The bidders for constructing stone and gravel roads, bids for which were opened by County Auditor O. D. Garrett, Apr. 8, follow: Woodward Brothers, Ossion, and L. A. Hutsell, Ossion; S. D. Iler, Markle; James Croster & son, Bluffton; Joseph Beers, Langrove.

**Hartford City, Ind.**—Contracts were awarded as follows, Apr. 5, by the County Commissioners: For the Day road, two miles long, in Licking Township, to Fred Snyder, at \$8,250; for the Jackson road, to Frank J. Wright, at \$9,236.

**Burlington, Ia.**—J. C. Riley & Co., of Omaha, Neb., have secured the contract for paving Main street; bid was \$1.85 per square yard for Burlington brick, \$1.91 for Galesburg brick and \$2.73 per square yard for granite.

**Webster City, Ia.**—Contract has been awarded to Litterell & Sullivan for about eleven blocks of brick block paving.—P. M. Banks, City Clerk.

**Fort Scott, Kan.**—Contract for the paving with brick of Main Street, from Second to Sixth, was let to the Mid-Continental Construction Company, by Council; work on this contract will be started within a few weeks. The bids for the paving of South Margrave Street, from Wall to Eighth, and Main Street, from Second to Sixth, were considered by Council, and the latter was let, the contract price to be \$11,626.10. Two other bids had been filed, one for \$11,700.22 by the Kellogg Company, another for \$11,822.54, by Ramsey & Ramsey, of Topeka, who paved Main Street from Wall to Second. The paving south to Sixth Street has been under consideration for two or three years, but has been delayed during that time for different reasons.

All bids for the paving of Margrave Street, from Wall Street south to Eighth, were refused, as the committee stated that all were over the estimate. Mr. White, one of the bidders, stated that his bid was below the engineers' estimate, and that he would enjoin the city from advertising for other bids, as the clerk was instructed to do, but as the Council reserves the right to reject any or all bids, it is thought they will proceed to ask for new bids.

**Baltimore, Md.**—F. E. Schneider & Co., in which Sheriff Padgett is an active factor, reaped a small harvest in paving contracts at the meeting of the Board of Awards, Apr. 14. Of the seventeen contracts awarded ten went to his concern. Mr. Padgett's company bid on sheet asphalt, and his prices were fairly good, as compared with previous quotations on sheet asphalt, ranging from \$1.85 a square yard to \$2.10, and in all cases his bids were lower than those on other materials. Four of the seventeen contracts let were awarded under the work being done by the Annex Commission, while the rest were jobs which will be carried out under City Engineer Fendall. Sheriff Padgett's contracts will total about \$57,000 of the \$75,000 involved. The contracts were:

Under Annex Commission—Twelfth Street, between North Avenue and Clifton Avenue, bitulithic on bituminous base, Warren Brothers Company, Boston, Mass., \$11,976; Fourteenth Street, between Clifton and North Avenues; sheet asphalt, F. E. Schneider, \$4,543.50; Valley Street, to Gorsuch, to Carswell, William Elder, sheet asphalt, \$1,626.80; Polk Street, Gorsuch to Carswell, bitulithic on bituminous base, \$1,824.10.

Under City Engineer—Ann Street,

**Lawrence, Kan.**—Haskins & Ramsey, of Topeka, have been awarded contracts for paving three streets, bids for which were opened April 5: On New York street, 6,700 square yards of two-course brick paving with sand filler and 300 cubic yards of earth excavation; Louisiana street, 2,500 square yards one-course, sand filler grout gutter, including 500 cubic yards excavation; Penn street, 800 square yards one-course, grout filler, 400 cubic yards excavation. Emel Stubeck has been awarded contract for limestone curb, 5x20 inches, at 49 cents. The detail bids on the paving work follow:

	NEW YORK STREET		LOUISIANA STREET		PENN STREET	
	Paving	Excav.	Paving	Excav.	Paving	Excav.
Haskins & Ramsey, Topeka, Kan.....	\$1.28	\$0.30	\$0.86	\$0.30	\$0.93	\$0.30
John Ritchie, Topeka, Kan.....	1.29	..	.87	..	.94	..
O. C. Chapin, Ilworth, Kan.....	1.29	.35	.84	.35	.92	.30
McGuire & Stanton, Ilworth, Kan.....	1.29	.36	.99	.36	1.04	.36
W. T. Menefee, Sedalia, Mo.....	1.44	.38	1.04	.32	1.06	.32
Joseph Ramsey, Topeka, Kan.....	1.29	.35	.88	.35	.83	.35
N. E. Stucker, Ottawa, Kan.....	1.30	.34	.86	.38	.93	.35



Gough to Pratt, Schneider, sheet asphalt, \$5,430.15; Callendar alley, Columbia Avenue to St. Peter Street, P. F. Reddington, vitrified brick, \$1,293.60; Chester Street, Baltimore to Orleans, Schneider, sheet asphalt, \$13,550.05; Clement Street, William to Riverside Avenue, Warren Bros., bitulithic, \$5,066.68; Ensor, Lamont Avenue to North, Schneider, \$2,224.41; Eager Street, Homewood Avenue to Ensor Street, Schneider, sheet asphalt, \$7,878.59; Lanvale Street, Eutaw Place to Linden Avenue, Schneider, sheet asphalt, \$3,328; Oliver Street, Caroline Street to Central Avenue, Schneider, sheet asphalt, \$5,796.85; O'Donnell Street, Chesapeake to Canton Avenue, P. F. Reddington, vitrified brick, \$10,931.18; Payson Street, Baltimore to Fayette, Schneider, \$5,102.26; Valley Street, Chase Street to Ashland Avenue, Schneider, \$9,263.24; Wilson Street, Bolton Street to Park Avenue, Schneider, sheet asphalt, \$3,030.80; William Street, Montgomery Street to Warren Avenue, Warren Bros., bitulithic, \$5,784.43.

**Frederick, Md.**—Following are totals of all bids opened Apr. 5 by the Mayor and Board of Aldermen for furnishing and laying approximately 10,360 square yards of vitrified fire clay brick paving on concrete foundation; furnishing and setting \$5,060 linear feet of granite curb, and resetting 360 linear feet of old granite curb; also furnishing all material and labor for laying approximately 1,370 linear feet of 24-inch vitrified fire clay pipe sewer, 1,020 linear feet 6-inch house connections, 490 linear feet 12-inch catch-basin connections, and the construction of 19 catch-basins and four manholes: Sands & Key, Norfolk, Va., \$30,145; E. McDonough, Myersville, Md., \$40,667; The H. C. Brooks Co., Fairmont, W. Va., \$32,455; Field, Barker & Underwood, Inc., and J. T. Neville, Philadelphia, Pa., \$35,164; LeFevre & Edwards, Cumberland, Md., \$3,042; Central Construction & Supply Co., Harrisburg, Pa., \$3,790; F. B. Sweeten & Son, Atlantic City, N. J., \$31,687; Harrison & Dean, Huntington, W. Va., \$32,786; Coryell Construction Co., Williamsport, Pa., \$34,507; R. M. Bibb, Roanoke, Va., \$32,720; Coblentz & Klipp, Frederick, Md., \$33,178; Wm. M. Elder, Baltimore, Md., \$34,495; E. C. Crum, Frederick, Md., \$33,612; Engineer's estimate, \$33,586.—Westinghouse, Church, Kerr & Co., Engineers.

**Lowell, Mass.**—Frank J. Mallory has been awarded the contract for 5,000 feet of edge-stones, and Mr. Mallory was also awarded the contract for flagging.

**Worcester, Mass.**—The Webb Granite Company, city, has secured contract for about 20,000 linear feet of curbing, the straight curb at 53 cents per linear foot and the circular curb \$1.10; circular corners, \$3.50; all f. o. b. Worcester. It also secured contract for standard paving 6 inches deep, \$1.60 per square yard, and 4 inches deep, \$1.50.

**Mason, Mich.**—Contract for about 5,600 square yards of brick paving has been awarded to Darrel Bros., of Lansing.

**Menominee, Mich.**—Council, April 2, awarded contracts for paving as follows: To Christopher Johnson, of Oshkosh, Wis., for Broadway at \$19,270; Marietta avenue, \$4,165, and to John Striffler, of Springfield, Ill., for Grand Boulevard, \$7,240; Ludington avenue, \$5,566, and Dunlap avenue, \$1,143. The detailed bids follow:

Christopher Johnson—Marinette avenue, macadam, 64½ cents; Broadway, 64 cents; concrete culvert on Broadway, \$645; Ludington avenue, 69 cents; Dunlap avenue, 67 cents; Grand Boulevard, 69½ cents; concrete culvert, \$465; Wells avenue, 67 cents. All of Mr. Johnson's catch basin bids were \$34 and the gutter cover \$4.

Cochems & Nebit, Sturgeon Bay—Dunlap avenue, macadam, 74 cents; Grand Boulevard, 69 cents; concrete culvert, \$350; Marinette avenue, 72 cents; Broadway, 69 cents; concrete culvert, \$585; Wells avenue, 75 cents; Ludington avenue, 75 cents; catch basins, \$40.

John Striffler: Macadam on Grand Boulevard, 64 cents; concrete culvert, \$250; Ludington avenue, 62 cents; Marinette avenue, 64 cents; Wells avenue, 64 cents; Broadway, 60 cents; concrete culvert, \$430; Dunlap avenue, 64; catch basins, \$35.

M. McCue, for laying macadam on each of the streets mentioned was 68 cents per square foot on each street; his catch basins to cost \$20 and the gutter covers \$3. The bid on the Broadway culvert was \$558 and the Grand Boulevard culvert \$300.

Western Improvement Company, of Racine: Macadam on Dunlap avenue, 64 cents; Marinette avenue, 64 cents; Ludington avenue, 74 cents; Grand Boulevard, 65 cents; concrete culvert, \$540; Broadway, 63 cents; concrete culvert, \$800; Wells avenue, 65 cents.

Robert Rick: Macadam on Broadway, 63 cents; concrete culvert, \$602; Grand Boulevard, 63 cents; concrete culvert, \$460; Wells avenue, 68 cents; Dunlap avenue, 63 cents; Ludington avenue, 70 cents; Marinette avenue, 66 cents.

**Bayonne, N. J.**—Council has awarded several contracts for public improvements, the principal one being for the asphalt of Sixteenth street between Avenue C and Broadway, Twenty-fifth street between Broadway and Avenue E and Forty-fifth street between the Boulevard and Avenue E; contract was awarded to the Warren Asphalt Paving Company, the lowest bidder; bid was \$29,707 for the entire work. The contract for the improvement of Fourteenth street went to Rudolph S. Blome, whose bid was \$17,004.50; E. M. Mullen got the contract for changing the water line on the Avenue A bridge, his bid being \$900; he also landed the contract for constructing sewers on the boulevard between Thirteenth and Fifteenth streets, Forty-third street between Broadway and Avenue E, and on Nineteenth street. His bid was \$2,679.50; for \$4,668 McCabe Brothers got the contracts for improving Twelfth street from Avenue A to the Boulevard; Forty-ninth street from Avenue B to the Boulevard, and Thirty-eighth street from Avenue C to the Boulevard; S. L. Harker got the contract for water lines on the Boulevard from Third to Fifth streets and Thirty-seventh street from Avenue B to the Boulevard and furnishing 32 hydrants; the bid was \$4,106.70.

**Long Branch, N. J.**—Bids were opened by the Board of County Freeholders for the construction of the Allentown and Imlays-town gravel road, 3.72 miles in length. There were six bidders. The bids ranged from \$23,000 to \$13,731. The latter bid, the lowest, was made by J. L. Butcher & Son, of Farmingdale, who were given the contract.

**Summit, N. J.**—Council has awarded the contract for supplying 4,000 tons of crushed stone to Larson Traprock Company, of Springfield, at \$1.25 per ton for ½-inch size, \$1.20 for 1-inch, \$1.15 for 1½-inch and \$1.05 for 2-inch size.

**Woodbridge, N. J.**—The Township Committee has received word from the Iroquois Steam Roller Company, saying that the roller had been shipped.

**Woodbury, N. J.**—Following is a list of bids received by the County of Gloucester, April 14: For resurfacing one-half mile of macadam road at Westville, according to William M. Carter, Engineer: McGovern Contracting Company, Trenton—4-inch foundation course for shoulders, 1,760 square yards at 60 cents, \$1,056; 3-inch Amiesite surface course, 4,693 1-3 square yards at \$1.00, \$5,693.33; 3,710 linear feet 6-inch underdrains at 25 cents, \$927.50; total bid, \$6,676.83.

New Jersey Contracting and Construction Company, Camden—4-inch foundation course for shoulders, 1,760 square yards at 48 cents, \$844.80; 3-inch Amiesite surface course, 4,693 1-3 square yards at 76 cents, \$3,566.93; 3,710 linear feet 6-inch underdrains at 15 cents, \$556.50; total bid, \$4,968.23.

J. F. Shanley Company, Philadelphia, Pa.—4-inch foundation course for shoulders, 1,760 square yards at 37 cents, \$651.20; 3-inch Amiesite surface course, 4,693 1-3 square yards at 55 cents, \$2,581.33; 3,710 linear feet 6-inch underdrains at 10 cents, \$371; total bid, \$3,603.53.

**Albany, N. Y.**—The bids received, Apr. 5, by the Board of Contract and Supply for the improvement of West Lawrence and Kent streets were: (a) pavement on gravel foundation; (b) pavement on concrete foundation: Michael F. Dollard, (a) \$8,975, (b) \$9,589; M. Kantrowitz, (a) \$8,016, (b) \$8,548; Hudson Valley Concrete Block Co., (a) \$9,700, (b) \$10,367; J. M. Holler, (a) \$8,208, (b) \$9,337; bidders all of Albany.—Walter Mellus is City Engineer.

**Binghamton, N. Y.**—A. D. Osborn has submitted lowest bid, opened March 31 by the Board of Contract and Supply, for paving with brick Lewis street, at \$1.60 per square yard, for Corning \$1.58, for Shawmut and \$2.08 for Metropolitan.

**Buffalo, N. Y.**—The work of repaving Richmond Avenue will probably begin by May 1, as the Park Commissioners have authorized Chairman Noble to enter into a contract with the German Rock Asphalt & Cement Company at its low bid of \$78,290 for an asphalt pavement on a new concrete base.

**Fort Wood, N. Y.**—Bids were received as follows, Apr. 12, by Lieut. William W. Besse, Constructing Q. M. U. S. A., for top-soil and seeding, sodding, repairing terraces and granolithic walks at Fort Wood: McHarg-Barton Co., top-soil and seeding, \$3,900; sodding and repairing terraces, \$2,370; repairing walks, \$75. Charles L. Doran Construction Co., top-soil, \$2.25 per cubic yard; sodding and repairing terraces, \$25 per M square feet; seeding, \$50 per acre; repairing walks, \$18 per square foot.

**Kingston, N. Y.**—Contract, bids opened March 19, for grading streets, regulating, furnishing and resetting curb and paving with repressed paving brick Broadway, Main, Wall and North Front streets, in all about 53,500 square yards, has been award-

ed to Ring & Foley, of Paterson, N. J., for \$128,417; Catskill brick will be used.—Dayton Murray, City Clerk.

**Little Falls, N. Y.**—Bids on East Main Street and John Street paving were opened; they were: East Main Street, Warren Brothers Co., bitulithic, 6-inch concrete base, \$7,552; Hallinan Bros., asphalt block (five-year guarantee), \$7,698, rock, \$5 yard extra; J. R. Baxter, Jr., asphalt block, \$7,750; R. D. Cooper, wood block, \$9,200; Hassam Paving Co., concrete pavement, \$1.85 square yard. For John Street, Warren Brothers Co., bitulithic, 6-inch concrete base, \$9,732.80, extras; Hallinan Bros., asphalt block (five-year guarantee) \$9,824, and extras; Mack, block, \$6,840, and extras; J. R. Baxter, Jr., asphalt block, \$7,750, and extras; R. D. Cooper, wood block, \$11,608.50, extras; Hassam Paving Company, \$1.85 per square yard, extras. It was thought from the extras and lump bids that the cost will be much more than it was last year—perhaps 20 or 30 cents a square yard more.

**Newburgh, N. Y.**—Contract was awarded for the new South Water Street paving to the Nolan & Horning Contracting Co., of West Hoboken, N. J., this firm being the lowest bidder. The cost of the work will be \$34,607.60. The large block was selected, and on this the successful bidder was but \$11.80 under the next lowest, Samuel Beskin, of Fishkill Landing; detailed bids were given last week.

**Niagara Falls, N. Y.**—Bids were opened April 6 for paving Linwood avenue, about 4,456 square yards, as follows: (a) asphalt, (b) Hassam, (c) brick or asphalt, (d) bricks; German Rock, Asphalt and Cement Company, Ltd., 306 D. S. Morgan Building, Buffalo, N. Y., (a) \$12,053; Read-Coddington Engineering Company, Niagara Falls, N. Y., (b) \$10,501; Frank V. E. Bardol, 400 D. S. Morgan Building, Buffalo, N. Y., (c) \$12,192; Henry P. Burgard Company, 275 Lathrop street, Buffalo, N. Y., (d) \$12,688.—W. P. Horne, City Clerk.

**Rochester, N. Y.**—The Board of Contract and Supply has received bids on several local improvements, the low bidders being: Darwin street brick pavement, Julius Friedrich & Company, \$3,110.50; Alexander street pavement, Whitmore, Rauber & Vivinus, \$5,207; Harvard street pavement, Thomas Holahan, \$8,500; Scott place and Melvin alley pavement, Clarence Alkenhead, \$2,280.50; Plymouth avenue sewer, Charles P. Gast, \$2,012; West avenue cement walks, John J. Regan, \$547.50; Goodman and Circle streets cement walks, W. A. Margrander, \$380.25; excavating and refilling trenches for water mains, Ripton & Murphy, \$986.

**Canton, N. C.**—City has awarded contract to R. H. Sorrells, of Canton, and D. L. Boyd, of Waynesville, for constructing macadam streets; estimated cost, \$30,000.

**Bowling Green, O.**—F. E. Bell and J. C. Stinchcomb, of Fostoria, have secured the contract for eight miles of 16-foot macadamized road in Jackson Township, Wood County; the engineer's estimate was \$54,086.25.

**Canton, O.**—Bids were received by the Public Service Board for the improvement of Cedar street from Marion street to Harrison avenue by grading, curbing and laying sawed stone sidewalks. Six contractors bid for the work. They were George Berger, Harry Corl, Frank A. Downs, Turnbull & Son, H. P. Hahn and Wise & Smith. The bids were referred to the City Engineer and Clerk to be tabulated and ascertain totals.

**Cincinnati, O.**—The Board of Public Service awarded contract April 6 for paving and grading Ludlow avenue to J. M. Quill for \$26,765.

**Columbus, O.**—Four contracts for street paving, costing an aggregate of over \$40,000, has been made by the Board of Service; streets to be paved with brick, the total cost and the successful bidders are as follows: Waldeck avenue, Eighteenth to Woodruff avenue, cost \$2,087; W. H. Luchtenberg & Co. Central avenue, Broad to Mound street, cost \$25,878; W. H. Luchtenberg & Co. Stanley street, Busch Addition, to Eighteenth street, cost \$3,756; W. H. Luchtenberg & Co. Kimball place, Mound to Bedford place, cost \$10,322; J. C. Beasley. Bids for both brick and asphalt paving were received for Weldeck avenue, and the Trinidad Paving Company, of Cleveland, was the lowest bidder on asphalt, but the Board decided to use brick.

**Dayton, O.**—The County Commissioners have awarded contracts for highway improvement involving an approximate gross expenditure of \$15,000. Three pikes will be improved: the Beavertown pike will be paved with macadam from the asylum hill to Beavertown. E. L. Gebhart secured the contract for furnishing crushed stone and screenings. His bids were: Crushed Centerville stone, \$1.48 per yard; screenings, 31 cents per yard. The same contractor secured the award for furnishing stone and screenings for the paving of the Lebanon

pike, from the corporation line of Dayton to Washington Township. John Rees was the lowest bidder for the contract, but as he was not prepared to furnish Centerville stone, the award was let to Gebhart. The letting of the contract for the paving of the Salem pike from the Catalpa drive to Philadelphia road was postponed because of a dispute between contractors as to the lowest acceptable bid.

**Mount Gilead, O.**—Bids were received, Apr. 5, by the County Commissioners for furnishing iron culvert pipe for Morrow County for this year; contract was let to the Gallon Iron Works Co., Gallon, O.—W. C. McFarland, County Auditor.

**Napoleon, O.**—Contract bids opened April 9, for improving about twelve miles of roads, has been awarded to C. S. Witham, Deshler.

**Toledo, O.**—Contract for paving Orange street, Superior to Huron, has been let to the Ohio Paving Company, which will pave it with vitrified brick for \$2,432.

**Youngstown, O.**—The bids for the Bissell avenue and Fruit street pavements, both to be of brick, have been tabulated; the low bids were as follows: Bissell avenue paving—Cement filler, Martin Fleming, \$6,709.35; asphalt filler, Kennedy Bros, \$7,372.75. Fruit street paving—Cement filler, Martin P. Connelly, \$6,689.20; asphalt filler, Anthony O'Horo, \$7,064.20.

**Sapulpa, Okla.**—City has awarded contract to American Paving Company for 40 blocks of asphalt paving.

**Butler, Pa.**—The Paving Committee of Council has awarded the contracts for the paving of three streets, on which the bids of four contractors, Messrs. Schaffner, Boyer, Harper and Morelli were all close, less than a hundred dollars between the figures of the quartet, and contracts were awarded Schaffner and Boyer. Mr. Schaffner was the lowest bidder on the Second Street and the Lincoln Avenue paving, while Mr. Boyer was awarded the contract for the paving of Oak street. The estimated cost of the paving of Second street was \$6,999.16, being but \$44 lower than the next bid. The estimate for the paving of Lincoln Avenue was \$4,902.40, or just \$9 lower than the bid of Mr. Boyer. The Oak Street contract was given to Mr. Boyer at \$1,710.70, there being but \$15 between the bids of Boyer and Schaffner on this contract.

**Chester, Pa.**—For repaving sidewalks with brick, the bidders were: Brinton C. Smith, recuring and setting curb, 70 cents per linear foot; new pavement, 72 cents per square yard; resetting old curb, 10 cents per linear foot; repaving, old brick, 15 cents per square yard; repaving sidewalks, new bricks, 55 cents per square yard; grading and filling, 27 cents per cubic yard. J. J. Hanna's bid was identical with that of Mr. Smith, with the exception that his price for repaving with old brick was 30 cents per square yard. Smith was awarded contract. Laying granolithic sidewalks: John Hanna & Sons, sidewalk, 18 cents per square foot; new curbing, 60 cents per linear foot; grading, 35 cents per cubic yard; only one bidder and contract awarded.

**Knoxville, Tenn.**—The Knox County Road Commission has awarded contracts for road improvements as follows: Asylum Avenue pike, Concrete Block and Paving Co., \$2,000; Ebenezer and Lowe's Ferry pike, Peters & Co., \$2,000; Hardin Valley pike, J. W. Gillespie, \$2,000; Dry Gap pike, A. H. Luttrell, \$1,000; Pickens' Gap pike, J. W. Gillespie, \$2,000; Rutledge pike, all bids rejected; Thorn Grove pike, J. P. McCarty, \$1,000; Sevierville pike, McCammon & Johnson, \$5,000; Clinton and Third Creek pikes, Horace A. Mann, \$8,000—\$5,000 for former and \$3,000 for latter pike; Jacksboro pike, all bids rejected; Martin's Mill pike, J. W. Gillespie, \$3,000; Kimberlin Heights pike, McCammon & Johnson, \$2,000; Beaver Ridge pike, all bids rejected; Jacksboro and Tazewell pikes, A. E. Gearns, \$3,500; Tazewell pike, Horace A. Mann, \$8,000; Maryville pike, F. E. Brady, \$2,000; Dandridge pike, F. E. Brady, \$8,500. Figures represent appropriation made by Commission, and bids were made on price per yard for removal and placing of dirt, macadam, etc. New proposals will be invited in cases where bids were rejected.

**Galveston, Tex.**—The contract and bond of the North American Dredging Company for filling the area between Avenues J and L from Forty-third to Forty-sixth Streets, was presented and approved by City Commissioners; also for filling block 340 and the area between avenues H and J, between Thirty-third and Forty-fifth streets.

The contract and bond of W. D. Haden for placing mudshell on the streets between Sixteenth and Nineteenth and Avenues D and I was received and approved.

**Hogium, Wash.**—F. A. Kessel Construction Company, Tacoma, has secured the contract, bids opened March 23, for improving Eighth and I streets at the following bid: Cleaning and grubbing, lump sum, \$1,675; 14,000 cubic yards excavation, 60 cents; 26,500 cubic yards filling, 65 cents;

30,000 feet retaining wall, \$25; 17,000 cubic yards brick pavement, \$3.04; 9,000 square yards concrete sidewalks, \$1.20; 7,600 lineal feet concrete curb, 40 cents; 900 lineal feet wooden stop, 60 cents; 15 manholes, each, \$58; 16 catch basins, each \$84; 900 lineal feet storm sewer, 12-inch, \$1.25; 760 lineal feet 14-inch, \$1.47; 970 lineal feet 18-inch, \$2; 5,000 lineal feet sanitary sewer, 8-inch, 98 cents; 3,700 lineal feet house connections, 6-inch, 60 cents; two flush tanks, each \$80; two combined manhole and flush tanks, each \$100; fixed estimate, \$2,500; total, \$110,486. Totals of other bids: Kibler & Hall, \$122,445, and Aberdeen Construction Company, Aberdeen, \$115,854.—Z. T. Wilson, City Clerk.

**La Crosse, Wis.**—Thos. E. Wooley has been awarded a contract for paving 6,643 square yards with brick on 6-inch concrete foundation, including 3,400 cubic yards old macadam excavation; also 3,633 lineal feet cement curb and 170 feet of headers, all for \$16,129. Other bids received were La Crosse Stone Company, \$16,394; E. S. Mead Stone Company, city, \$16,448.85.—A. J. Roberge, Commissioner Public Works.

## SEWERAGE

**Brighton, Ala.**—Citizens have voted \$10,000 bonds to construct storm and sanitary sewers.

**Monticello, Ark.**—Council has decided to construct seven miles of sewers at a cost of \$35,000.

**Colusa, Cal.**—Citizens will vote on a bond issue for a sewerage system.

**Mayfield, Cal.**—Citizens have voted \$37,000 bonds for a sewer system.

**Oroville, Cal.**—City Trustees have instructed Sewer Committee to confer with the local civil engineers in order to formulate general plans for a sewer system.

**San Bernardino, Cal.**—County Supervisors will have to build a new sewer from the county hospital to connect with the city's new 12-inch sewer to be laid in Mt. Vernon avenue.—City Engineer Sloan.

**San Francisco, Cal.**—The Street Committee is considering petition for construction of sewer in the Oceanside district.

**San Francisco, Cal.**—City has selected Rudolph Hering, New York, as consulting engineer for sewers and garbage disposal system.

**San Francisco, Cal.**—Citizens are urging the construction of a sewer in the Ingleside district.

**San Jose, Cal.**—The East San Jose Board of Trustees is considering installation of a sewer system; plans have been prepared.

**Willets, Cal.**—Citizens have voted \$30,000 bonds for the construction of a sewer system.

**Tampa, Fla.**—Citizens will vote May 18 on \$40,000 bonds for sewerage in new territory and \$10,000 for sewers in old territory.

**Athens, Ga.**—Council has ordered a sewer constructed in Cobb street.

**Savannah, Ga.**—City is considering the construction of a storm sewerage system in the southern part of the city.

**Valdosta, Ga.**—Citizens have voted \$50,000 bonds for extension of sewerage and other improvements.

**Aurora, Ill.**—City is considering construction of a gravity sewer in the Third and Fourth wards.—M. J. Tarble, City Engineer.

**Moline, Ill.**—Council has decided to lay a sewer in the new shop district.

**Sterling, Ill.**—City Engineer N. P. Palmer has completed plans for the sewer system in Second avenue.

**Indianapolis, Ind.**—Steps are being taken to secure a site for a sewage disposal plant estimated to cost \$1,000,000.—B. H. Miller, City Engineer.

**Indianapolis, Ind.**—The Board of Public Works is considering construction of sewers in Colorado avenue, Thirteenth, Miller and Meridian streets.

**Indianapolis, Ind.**—The Board of Works has adopted resolution for a sewer in Beechward avenue.

**South Bend, Ind.**—The Board of Public Works has been instructed to proceed with plans for the extension of the Kenwood avenue trunk sewer.

**Vincennes, Ind.**—Citizens will vote May 11 on the installation of a general system of sewerage.

**Waterloo, Ia.**—Bids will soon be asked on concrete and brick, reinforced concrete pipe, concrete and vitrified pipe for the West Side sewer; cost, \$75,000.—C. T. Wilson, City Engineer; R. C. Thompson, City Clerk.

**Abilene, Kan.**—Plans are being prepared by Engineers Burns & McDonnell, Scarritt Bldg., Kansas City, Mo., for a system of sewers.

**Osawatomie, Kan.**—Plans are being prepared by Engineers Burns & McDonnell, Scarritt Bldg., Kansas City, Mo., for a system of sewers.

**Mt. Sterling, Ky.**—E. E. Collins, Philadelphia, will prepare plans for sewerage system.

**Tyler, Ky.**—City will make surveys for sewer and street improvement; sewer pipe will be purchased.—T. D. Johnson, Jr., City Engineer.

**Cumberland, Md.**—Council is considering the laying of a two-foot terra-cotta sewer and necessary catch basins at a cost of \$1,000; also a sewer in Laing avenue.

**Lynn, Mass.**—City Engineer has estimated the cost of a concrete covered culvert under Boston street at \$3,500; the Board of Health urges that a sewer be laid in Camden street and that the proposed Boston street sewer be continued to the East Saugus bridge.

**Malden, Mass.**—Council has passed on concurrence an order that \$20,000 be borrowed for the extension of the sewerage system.

**New Bedford, Mass.**—The Board of Aldermen has voted \$14,000 for the Brook street sewer system.

**Spencer, Mass.**—Town has voted \$5,500 for a new trunk sewer from Temple street.—E. D. Marchesseau, Chairman Committee.

**Lexington, Miss.**—Citizens will vote on a bond issue for a sewerage system.

**Nebraska City, Neb.**—Plans are being prepared by City Engineer C. W. Pierce for the construction of two lateral sewer districts.

**Freehold, N. J.**—The Water Commissioners have contracted with a firm of New York surveyors and engineers to make a survey and plans for the proposed extension of the sewer system.

**Linden, N. J.**—Citizens will vote April 27 on \$35,000 bonds for the construction of a sewer system.

**Millville, N. J.**—The Board of Health has ordered property owners west of Buck and north of the Maurice River and Broad street to connect with the sewer.

**Perth Amboy, N. J.**—Middlesex County Board of Freeholders has decided to macadamize ten roads.

**Perth Amboy, N. J.**—Council has decided to lay a 15-in. pipe sewer in Neaville and Groom streets.—Wilbur Le Roe, City Clerk.

**Brockport, N. Y.**—The Board of Trustees is considering the paving of College, South and Holly streets and Monroe avenue.

**Canandaigua, N. Y.**—The Board of Trustees is considering the extension of sewers.

**Utica, N. Y.**—The Board of Contract and Supply has rejected all bids for the construction of storm water sewer system; James E. Martin was the low bidder at \$14,423.

**Waverly, N. Y.**—Plans have been accepted by the Village Trustees for the proposed sewer system.—N. O. Walker, Athens, Consulting Engineer.

**Bucyrus, O.**—Council is considering the installation of a sewage disposal plant.

**Canton, O.**—City will issue \$6,000 bonds for a storm water sewer on East Eighth street.

**Cincinnati, O.**—Council has decided to lay sewers in Fairmont and Thompson avenues, Knox, Ross, McBayer, Luckey and Trade streets.—Edwin Henderson, Clerk.

**Collinwood, O.**—Citizens will vote May 24 on a \$9,000 bond issue to connect the sewer system with the lake.

**East Liverpool, O.**—The Board of Public Service is considering the sewerage of the new Columbia Park addition.

**Garwood, O.**—Borough Council has ordered the purchase for \$1,800 of several lots in the northeastern section of the borough for disposal beds for the sewer to be built in the former Westfield section of the borough; borough has plans under way to build a system capable of caring for 50,000 gallons of sewage daily.

**Lorain, O.**—Council is considering construction of sewers in East Erie avenue, Harrison street and Ashland avenue.

**Mansfield, O.**—Bids will be received by the Board of Public Service very soon for constructing an 8-inch sanitary sewer in Mulberry, Poplar, Hammond, Lawrence and Altamont streets.—City Engineer Hursh.

**New Philadelphia, O.**—City is considering improvement of its sewer system.

**Capitol Hill, Okla.**—Citizens will vote April 27 on \$15,000 bonds for sewer construction.

**Cherokee, Okla.**—Citizens will vote on \$35,000 additional bonds for the extension of the sewerage and water works systems.

**Colgate, Okla.**—Citizens have voted \$50,000 bonds for water works extension, sewers and City Hall.

**Weatherford, Okla.**—City is considering a \$20,000 bond issue for sewer construction.

**Klamath, Ore.**—An election will be held on a new city charter, which will provide for the installation of a sewerage system and for the paving of Main street.

**Bedford, Pa.**—Engineer C. E. Collins, Drexel Bldg., Philadelphia, has completed plans for a complete system of sanitary sewers, consisting of about 11 miles of pipe sewers, varying in size from 6 to 18 inches; sewage disposal plant consists of a septic tank and sprinkling filters.—D. C. Reiley, Borough Clerk.



**Harrisburg, Pa.**—Council is considering the reconstruction of a sewer in Compass alley, cost \$450, and one in Swatara street and Brook street.

**Media, Pa.**—The Sewer Committee, Dr. C. M. Harvey, Chairman, is preparing recommendations following an investigation of the proposed establishment of a system of underground sewerage.

**Nanticoke, Pa.**—Borough Engineer Samuels has submitted plans for the extension of the cemetery hill sewer to the new hospital.

**New Castle, Pa.**—City Engineer Milholland is urging the building of a sewage disposal plant.

**Norristown, Pa.**—The Legislature has passed a bill appropriating \$30,000 for a sewage disposal plant at Hospital for Insane.

**Philadelphia, Pa.**—Plans for this city's proposed sewage disposal system, which will cost about \$50,000,000, are being considered by Chief Webster, of the Survey Bureau; Rudolph Hering, of the firm of Hering & Fuller, Consulting Engineers, 170 Broadway, New York City, and Director of Public Works Stearns and Assistant Engineer G. A. Datesman.

**Pittsburg, Pa.**—City Engineer Stone, Borough Engineers Freese and Sperling and the Pennsylvania Railroad Engineer will meet and decide the changing of the course of Nine Mile Run, so that the course may be diverted to run along West street under the walks in large pipes; plans will be arranged by the engineers together with the cost and Councilman McCurdy will report the same to Council.

**Pittsburg, Pa.**—Mayor Magee is urging an expenditure of at least \$15,000 for experiments for system for the disposal of sewage.

**St. Clair, Pa.**—Borough will vote \$90,000 bonds for the installation of a sewer system.

**Wilkes-Barre, Pa.**—Council is considering ordinances directing that terra cotta sewers be located on Old River road, Birch street, Academy, Miner, Moffatt, Ambrose avenues and Marlborough avenue.

**Chattanooga, Tenn.**—The Central Improvement Company will expend about \$15,000 for construction of sewers, streets and sidewalks.

**Hillsboro, Tex.**—Citizens have voted \$12,000 bonds for improvement and extension of sewer system and water works.

**Houston, Tex.**—Council has adopted detailed plans and specifications for the big storm sewer proposition which is to cost approximately \$225,000 and be paid out of the recent bond issue of \$700,000; advertisements will be prepared at once calling for bids on the work.

**Texas City, Tex.**—The Texas City Company is considering construction of a sewer system.

**Yoakum, Tex.**—City is receiving bids for a franchise for the construction of a sewerage system.—W. F. Adams, City Secretary.

**Salt Lake City, Utah.**—City will expend \$498,746.66 on sewer extensions, \$4,214.75 on main intercepting sewers, \$650 on main sewers, \$6,000 on discharge main intercepting sewer station and \$2,000 on sewage farm.—L. C. Kelsey, City Engineer.

**Richmond, Va.**—Committee on Streets, Water and Finance has recommended a \$1,150,000 bond issue for the extension of sewers and water mains; of this amount \$943,778 will be used for trunk and lateral sewers and sewer connections.

**Tacoma, Wash.**—Citizens have voted \$75,000 bonds for constructing trunk line storm water sewers.

**Tacoma, Wash.**—Council is considering the construction of a reinforced concrete storm water viaduct in Gallagher Gulch and a sanitary sewer in District No. 182.

**Vancouver, Wash.**—City will sewer a portion of territory west of Franklin street.—H. H. Lotter, City Engineer.

**Madison, Wis.**—Council has decided to lay a drain on East Wilson street, cost \$6,000; City Engineer Icke is preparing plans for a big drain on East Washington avenue, cost \$66,000 to \$18,000 to \$20,000.

## BIDS RECEIVED AND CONTRACTS AWARDED

**Augusta, Ga.**—City has awarded contract to E. J. Erbelding, of Augusta, at \$7,156.60 for sewer construction during 1909; Nisbet Wingfield, Commissioner Public Works.

**Canton, Ga.**—J. B. McCrary & Co., Atlanta, have contract to construct sewer system; \$5,000 bonds issued.

**Cedartown, Ga.**—City has awarded contract to J. W. Wilkinson & Co., Ensley, Ala., for construction of about two miles of sewers; bid is \$1.95 for rock, 45 cents for earth and 15 cents for laying pipe; pipe to be furnished by city.—S. S. Evans, City Engineer.

**Silvis, Ill.**—The People's Construction Company has been awarded the contract for laying a combination sewer and water pipe system throughout the entire city; the contract has been under the consideration of the Silvis officials for several weeks, and was awarded to the Davenport firm because of their figures being the lowest received. Dan Keeler, president of the People's Construction Company, is in charge of the work, and by May 1, if the weather allows, he will have a force of men at work laying the pipes.

**Sioux City, Iowa.**—The following are the bids opened April 13 for constructing reinforced concrete conduits for diverting Bacon Creek: (a) 2,600 feet 8x10 feet reinforced concrete; (b) 600 feet 5 feet 6 inches 2-ring brick sewer; (c) total: Cook Construction Company, Des Moines, a \$25.24, b \$10.24; F. J. Sulzbach, Sioux City, a \$20.87, b \$6.50; R. E. Betz, Sioux City, a \$16.65, b \$6.15; John A. Swanson, Sioux City, a \$14,305, b \$6.82; c \$41,272.—G. Y. Skeels, City Engineer.

**Clay Center, Kan.**—The contract for constructing main sewers in Clay Center, bids opened, Mar. 29, has been awarded by the city to E. D. Reed, city, at \$9,464.—G. S. Martin, City Clerk.

**Hutchinson, Kan.**—The contract for the extension on the East Side sewer and a sub-main running south to the river on Main street was let to the firm of Davis & Heiser at \$3,096.38; other bidders were Howard & Son and the Heinicke Contracting Company.

**Lexington, Ky.**—Thomas Ahern & Company submitted the lowest bid on the contract for the construction of a sewer on Grosvenor avenue from Rose street to Arlington ave when the bids were opened by Mayor Skain. Thomas Ahern's bid was the lowest, Joe Melvin's next, and Thomas O'Day's the highest. The bid of Thomas Ahern & Company was as follows: Eight-inch pipe, 50 cents per foot; 5-inch pipe, 35 cents per foot; 5-inch 1/4 bend, 50 cents each; manholes, \$25 each; flush tanks, \$50 each; rock excavations, \$2.50 per cubic yard; timber sheathing, \$24 per 1,000 feet board measure.

**Baltimore, Md.**—Upon recommendation of the Sewerage Commission, the Board of Awards awarded the two sanitary lateral sewer contracts, respectively, to James Ferry & Sons, of Grafton, Pa., at \$42,783.05, and Ryan & Reilly, of Baltimore, at \$50,776.25. The first of these two concerns enters the competition for the first time for sewerage contracts.

**Brookline, Mass.**—Bids were opened April 5 by the Board of Selectmen for sewers in Saw Mill Brook Valley and Park Vale, in all about 6,550 feet of from 30 to 8-inch pipe sewers, and contracts have been awarded to M. H. Lynch, 106 School street, Roxbury, and C. G. Craib, 240 Pleasant street, Winthrop.—E. A. McEthick, Secretary.

**Ft. Andrews, Mass.**—Frank Williams & Bro., Boston, Mass., have been awarded the contract, at \$2,450, for the construction of extension and relocation of sewer mains and water mains at Ft. Andrews.

**Lowell, Mass.**—Sewer castings for 1909 will cost the city of Lowell less than for any other year in her history. In 1907 the city paid \$3 a hundred pounds for sewer castings and this year the price will be

\$1.74 a hundred. The contract for castings, representing the requirements of the current year, were awarded at the office of the Purchasing Agent and went to the Union Foundry, the bid being \$1.74 per hundred pounds and the next lowest bid was \$1.90. The cause of this remarkable reduction is due to the sharp bidding that started last year. The contract last year amounted to about \$1,200.

**Menominee, Mich.**—Four sewer bids were received as follows: Mulholland & Company: Marinette avenue, 6-inch sewer, 60 cents; 10-inch, 95 cents; manholes, \$50. Wells avenue, 6-inch, 28 cents; 8-inch, 80 cents; 10-inch, \$1.50; manholes, \$50. John Striffler: Martha avenue, 6-inch sewer, 40 cents; 10-inch, 62 cents; manholes, \$35. Wells avenue, 6-inch, 25 cents; 8-inch, 35 cents; 10-inch, 40 cents; manholes, \$35. Christ Johnson: Martha avenue, 6-inch, 49 cents; 10-inch, \$1.24; manholes, \$35. Wells avenue, 6-inch, 30 cents; 8-inch, 45 cents; 10-inch, 52 cents; manholes, \$30. John Sanderson: Wells avenue, 6-inch, 34 cents; 8-inch, 44 cents; 10-inch, 49 cents; manholes, \$38. Martha avenue, 6-inch, 65 cents; 10-inch, \$1; manholes, \$38.

**Millville, N. J.**—Thomas & Wathius, the lowest bidder, at \$22,224, for sewage purification plant, as stated last week, has secured the contract at the following bid: 450 cubic yards reinforced concrete, \$7.75; 670 cubic yards plain concrete, \$5.25; 5,000 cubic yards excavation, 50 cents; 100 cubic yards rolled embankment, \$1.15; 2,222 cubic yards filtering material, \$2.50; 60 feet 12-inch cast iron pipe, laid in concrete, \$2.93; 220 feet terra cotta pipe, laid in concrete, 69 cents; 10,000 feet 6-inch drain tile, 10 cents; gates and valves, \$817; special castings, \$2,127; stop planks, \$115; aeration well, trough and funnel, \$1,924; 2-horsepower gasoline engine, complete, \$300; frame buildings and plant, \$322; centrifugal pump, \$115. Time of completion, July 31, 1909.

**Little Falls, N. Y.**—Two bidders entered for the East Main Street storm sewer, R. D. Cooper and Hallinan Brothers; Cooper offered to do the work for actual cost, plus \$180. Hallinan Brothers for \$1,284; Mr. Cooper's estimate, the Board figured, was about \$40 more than that of Hallinan Brothers, and so the firm's bid was accepted.

**Utica, N. Y.**—The Board of Contract and Supply, Apr. 8, opened bids for the construction of the storm water sewers in the southern part of the city. The total amounts of the bids received were as follows: J. E. Martin, \$14,423.25; A. N. Johnston, \$14,929.75; John F. Augar, \$16,102.55; H. R. Beebe, \$16,672.50; N. D. Peters, \$17,855; R. Perretta, \$17,993.40. There was considerable discussion as to the bonds which accompanied the proposals; the Board considered that it would be taking action of questionable legality in accepting any of the bids, and consequently all were rejected.

**Canton, N. C.**—City has awarded contract to M. H. Kelly, of Asheville, for construction of sewer and water system; sewage will empty into Pigeon River.—J. N. Mease, Mayor.

**Eaton, O.**—E. M. Gephart & Co., of Dayton, have secured contract for sewage disposal plant for \$11,786. Other bids received were: J. L. H. Barr, Batavia, \$17,437; S. W. Parshall & Son, Akron, \$15,575.24; Theo. Hill, Bellefontaine, O., \$17,529, and Geo. F. Roos, Eaton, O., \$14,597.—A. L. Reed, Village Clerk.

**Oxford, O.**—The following are the bids opened April 9 by the Board of Public Service for sewage disposal plant: F. M. Benner & Co., Marion, Ind., \$15,171; Northwestern Construction Company, Franklin, Pa., \$15,240, and John T. Reese, Dayton, \$15,429.—Riggs & Sherman, of Toledo, Engineers.

**Youngstown, O.**—The bids for sewers in Fithian and Poland avenues and catchbasins in Glenwood avenue, Garfield street and West Myrtle avenue have been tabulated; low bids are as follows: Fithian avenue sewer—E. Diorio, \$476.40; catchbasins, A. O'Horo, \$1,440. Poland avenue sewer—District No. 1, Joseph Hannon, \$8,-

## LAWRENCE, KAN., APRIL 6, 1909—BIDS OPENED

	SEWER No. 406				SEWER No. 407				SEWER No. 412				SEWER No. 4—N. Y.-N. J.			
	800 ft. 8-in. Pipe	Flush Tank	1-in. Water Pipe	Rock	800 ft. 8-in. Pipe	Flush Tank	1-in. Water Pipe	Rock	1500ft. 8-in. Pipe	Flush Tank	1-in. Water Pipe	Rock	1050ft. 8-in. Pipe	Flush Tank	1-in. Water Pipe	Rock
Fred Bauer, Webb City	\$0.54	\$85.00	\$0.30	\$4.00	\$0.53				\$0.60				\$0.49	\$85.00	\$0.30	\$4.00
Graeber Bros., Lawrence	.59 1/2	80.00	.22	4.50	.54				.60				.55	80.00	.33	4.50
O. C. Chapin, Leavenworth	.65				.60				.65				.60			
McGuire & Stanton	.57			2.75	.64				.64				.57			

Fred Bauer was awarded contract on Nos. 406, 407 and 4, and Graeber Bros. on No. 412.

284.46; District No. 2, A. O'Horo, \$7,937.40; District No. 3, Joseph Hannon, \$808.

**Dunmore, Pa.**—There were three bids for the Third Ward sewer job, the contract being awarded to Summa & Sauteserro, for \$3,100. Harry Kizer's figure was \$3,147, and the Engineering Construction Company's \$3,848.

**South Bethlehem, Pa.**—Chairman J. P. McFadden, of the Sewer Committee, has reported the receipt of bids for the construction of a sewer on Fifth Street, between Linden and Centre streets, from H. E. Stoult, B. H. Birkel, S. W. Chiles, W. C. Gillin, A. J. Warlow and W. F. Danzer & Co., which were referred to the Sewer Committee for compilation.

**Galveston, Tex.**—The bid of Horton & Horton for constructing the Twenty-sixth street drain, from Market street to the bay, was accepted by the City Commissioners. The bid of Kelso & Vautrin for laying vitrified drains on Avenues E, F, G and H, between Sixteenth and Nineteenth streets, into the Nineteenth street drain, was also accepted.

**Port Townsend, Wash.**—The Moore Construction Company, Tacoma, has secured contract, bids opened April 6, for constructing 8 miles of sewers.

**La Crosse, Wis.**—Olaf Swenner, city, has been awarded a contract for constructing 3,034 feet, 24 to 30-inch circular concrete sewer, proportions 1:2½:5, 2½ to 4½-inch shell, depth of trench, 16 to 30 feet, sand excavation, for \$12,984. F. Hildebrand, Milwaukee, has been awarded a contract for constructing 1,171 feet egg-shaped concrete sewer, 48x72 inches, proportions 1:2:4, 6-inch shell, 30-foot trench, sand excavation; also 2,589 feet, 52x78 egg-shaped concrete sewer, proportions 1:2:4, 6-inch shell, in 27-foot trench, sand excavation, for \$30,261. C. Nobles, city, has been awarded a contract for constructing 2,505 feet of 30-inch circular concrete sewer, proportions 1:2:4, 6-inch shell, trench 21 to 27 feet deep, sand excavation, also 283 feet 52 inches by 78 inches, 0 to 17-foot trench; 17 feet 52 inches by 78 inches, 0 to 17 trench, 6-inch shell; 16 feet of 30-inch circular concrete sewer, proportions 1:2:4, 6-inch shell, 0 to 17 feet deep, and 96 feet of 62-inch steel pipe, all for \$17,200; manholes averaging in depth 23½ feet, prices \$75 to \$100; wages of common labor, \$1.75 per day.—A. J. Roberg, Commissioner of Public Works.

## WATER SUPPLY

**Batesville, Ark.**—City is considering installation of 250-hp. Corliss engine and 250-amp. dynamo in water and electric light plant; cost, \$6,000.

**Magnolia, Ark.**—City will install a water works system.

**Chico, Cal.**—Citizens of Nord, Sacramento and Kennedy avenues have decided to dig wells along the avenues, as water mains do not run in that direction.

**Colusa, Cal.**—Citizens will vote on a bond issue for a municipal water plant.

**San Francisco, Cal.**—Citizens will vote June 24 on a bond issue to construct the Hetch-Hetchy water system.

**Sunnyvale, Cal.**—Citizens have voted to bond the town for \$2,000 to install new fire hydrants and improve the department.—G. T. Balch, Fire and Police Committee.

**Denver, Col.**—Meyer Freedman, who has given considerable study to the water question, has recommended the erection of a municipal plant.

**Norwalk, Conn.**—House has passed a bill authorizing city to issue \$70,000 water bonds.

**Waterbury, Conn.**—City will install an expensive filtration plant.—Mayor W. I. Thomas and Councilmen W. J. Smith, F. B. Welker, J. S. Lawler, M. D. Russell, P. Heck and P. Lawler, Committee.

**Washington, D. C.**—A report has been received from an American consul in Africa, advising that an amount of \$110,000 has been included in the budget of the local government to be applied to drilling for artesian wells and for the study of other public works. American manufacturers of well-drilling machinery are requested to send their catalogues and prices f.o.b. New York to the consulate forwarding the report.—Address No. 3302, Bureau of Manufactures.

**Jacksonville, Fla.**—Council is considering bill adopting plans for the extension of high-pressure mains through certain streets of the city, and to authorize the Board of Bond Trustees to construct high-pressure mains and a pumping station.

**Mulberry, Fla.**—L. N. Pipkin has decided to erect a 50,000-gallon tank and lay six miles of mains as an addition to his water works.

**Macon, Ga.**—Council is considering the purchase of present water works or the erection of a new plant.

**Valdosta, Ga.**—Citizens have voted \$50,000 to extend water works system; erect an electric light plant and other improvements.

**Cerro Gordo, Ill.**—Bids will be received April 21 for constructing water works, including steel work for tower; substructure completed.—O. N. East, Village Clerk.

**Cerro Gordo, Ill.**—Bids will be received April 21 for constructing a connected system of water pipes, requiring 1,212 feet 8-inch, 1,884 feet 6-inch, 17,232 feet 4-inch cast-iron pipe, 11,000 pounds special castings, 14,000 pounds lead, 41 hydrants, two 6-inch and 14 4-inch gate valves and 16 valve boxes.—O. N. East, Village Clerk.

**Ottawa, Ill.**—Council is considering extension of water mains on Adams street; cost \$910.

**Rockford, Ill.**—Superintendent Crowley has recommended the replacing of all mains under 4-inch with 6-inch throughout the city.

**Rock Island, Ill.**—Bids will be advertised for plans and specifications for the construction of a filtering plant at the reservoir on the hillside; former bids on the filtering plant at the water works plant have been thrown out and the Committee recommended the construction of the filtering plant on the hill; plans will be supplied by the filtering companies.

**Waukegan, Ill.**—Council has passed an ordinance authorizing the construction of water supply pipes in portions of County street and Palmer place.—Alderman J. F. Bidingier, City Clerk Pro. Tem.

**Elkhart, Ind.**—City has granted a new franchise to the Elkhart Water Works Company; company will expend \$50,000 in improvements at an early date.

**Kendallville, Ind.**—Council has voted \$3,000 for improvements to the city water works system.

**Lincoln City, Ind.**—Bids are being received for the construction of a water works system at the Nancy Hanks Lincoln Park.—B. F. Bridges, Commissioner.

**Lewisville, Ind.**—Citizens have voted \$10,000 bonds for the installation of a water works system.

**Lyons, Ind.**—Geo. C. Morgan, 160 Jackson boulevard, Chicago, Ill., will prepare plans for the proposed water works; cost, \$10,000.—L. D. Bixler, City Clerk.

**South Bend, Ind.**—The Board of Public Works is considering extension of water mains, from Franklin and Calvert streets, to the Lake Shore Railroad.

**Greenfield, Ia.**—Town is considering construction of water works.

**Baltimore, Md.**—Fire Board will select Frederick Pike Stearns, John Ripley Freeman and C. W. Hendrick, Chief Engineer Sewerage Commission, to pass on plans drawn by Daniel E. Banks for the proposed fire pipe line system.

**Chicopee, Mass.**—The Board of Aldermen has adopted a resolution recommending that the Water Commissioners furnish Fairview with water.

**Holyoke, Mass.**—The Water Board will ask for bids on 10, 8 and 6-inch pipe and fittings for extension of mains on Mosher, Canal, Grover streets, St. Jerome and Roosevelt avenues.

**Marblehead, Mass.**—Town will install a filtration plant; estimated cost, \$15,000.

**New Bedford, Mass.**—Council has adopted \$250,000 bond order to duplicate the supply mains from High Hill reservoir.

**Grand Rapids, Mich.**—Citizens have voted to issue \$200,000 bonds for extension and improvement of the water works system.

**Hartford, Mich.**—Village will make improvements to water works system.—A. T. Maltby, 803. 77 Jackson boulevard, Chicago, Ill., Consulting Engineer; D. F. Cockrane, City Clerk.

**Gilbert, Minn.**—City will lay temporarily a surface pipe connected with the main water system.

**Laurel, Miss.**—Bids will be received May 4 on \$10,000 water works extension bonds.

**Meridian, Miss.**—The Meridian Water Works Commission is considering plans for construction of 500,000-gallon reservoir at the water works; reservoir will cover about 80 acres, and dam, spillway, etc., about 20 acres additional; cost, \$75,000.—W. F. Wilcox, General Manager.

**Moss Point, Miss.**—City will install water works system.—W. G. Kirkpatrick, Jackson, Miss., has been selected to make preliminary survey.—Geo. W. O'Neill, Mayor.

**Omaha, Neb.**—Citizens will vote at the May election on a \$6,500,000 bond issue for the purchase of the water plant.

**Netcong, N. J.**—Citizens will vote May 18 on the purchase of the water plant; about \$35,000 will be needed.

**New Brunswick, N. J.**—City will expend about \$10,000 for extension of water mains.—Mayor W. E. Florence.

**Oakhurst, N. J.**—The village is urging the Tuckerin Manor Water Company to extend its lines through this place to West End.

**Perth Amboy, N. J.**—Citizens are urging the construction of a 6-inch water main in Elizabeth avenue.

**Salem, N. J.**—Council has ordered improvements of the city water plant, at a cost of \$2,500.

**Buffalo, N. Y.**—City has sold \$500,000 water bonds to N. W. Halsey & Co. and Lee Higginson & Co., of New York City.

**Cohoes, N. Y.**—The Board of Water Commissioners together with Prof. Mason, of the R. P. L., Troy, and Samuel Gray, of Providence, R. I., have received the specifications for the new filtration plant; necessary changes which Mayor Hanson and the Water Commissioners thought ought to be made were outlined and the changes will be made by Mr. Gray and Prof. Mason in about a week.

**Livonia, N. Y.**—N. Adelbert Brown, of Rochester, has been selected as engineer for the proposed water works improvements; cost, about \$6,500.—J. E. Barber, Village Clerk.

**Newburg, N. Y.**—Citizens will vote May 20 on \$185,000 bonds, as follows: For raising Washington Lake dam, \$66,000; for furnishing and laying a new 30-in. main from Washington Lake to city, including engineering, etc., \$87,500; for moving house, barn, etc., about \$3,500, and for installing meter on intake pipe at lake, \$1,000.—W. V. Hawks, Chairman Water Commissioners.

**Niagara Falls, N. Y.**—Bids will be advertised about June 1 for the proposed new water works system; plans have been prepared by City Engineer Robbins.

**Peekskill, N. Y.**—The Board of Water Commissioners has decided to purchase a sand washing machine.

**Syracuse, N. Y.**—City will erect a standpipe on the hill overlooking Woodland reservoir.

**Syracuse, N. Y.**—The Board of Contract and Supply will soon call for bids for the erection of a \$50,000 standpipe; tank will be 40 ft. high and will have a capacity of 1,000,000 gallons.

**Murphy, N. C.**—Surveys and estimates have been made by Joseph B. Rider, Civil Engineer, Louisville, Ky., on cost of constructing water works; \$40,000 bonds will be issued.

**Brooklyn Heights, O.**—Village will vote May 11 on \$18,000 bonds for the erection of a water works and the supplying of water to the village.—M. L. Ruetenik, Mayor.

**Collinwood, O.**—Citizens will vote May 24 on a \$15,000 water works bond issue.

**Dayton, O.**—The erection of a tank to hold no less than 40,000 gallons of water, to be stationed on Huffman Hill to furnish a standard pressure supply for that end of the city, is being planned by the Service Board.—Chief Engineer Geo. H. Benzenberg.

**Lima, O.**—The Board of Public Service has recommended that a larger water main be placed in West Market street; cost, \$15,000.

**Mechanicsburg, O.**—Council has received a petition from H. B. Stephens for a franchise for water works.

**Miamisburg, O.**—Council has decided to extend water mains on Main, Montgomery, East Pearl, Spruce, Water and North Fourth streets; estimated cost, \$4,123.84; 7,500 feet of pipe will be used.

**Afton, Okla.**—Plans have been prepared by Engineers W. K. Palmer Co., Dwight Bldg., Kansas City, Mo., for a system of water works; cost, \$30,000.—R. A. Judd, City Clerk.

**Amarillo, Okla.**—The Amarillo Water, Light and Power Company will install 400-hp. gas producer and gas engine.—G. B. Findley, Machesney Bldg., Pittsburg, Pa., Engineer.

**Capitol Hill, Okla.**—Citizens will vote April 27 on \$35,000 bonds for construction of water works.

**Cherokee, Okla.**—Citizens will vote on \$25,000 additional bonds for the extension of the water works and sewerage systems.

**Colgate, Okla.**—Citizens have voted \$50,000 bonds for water works extension, sewer system and City Hall.

**Minco, Okla.**—Plans are being prepared by Engineers Burns & McDonnell, Scarritt Bldg., Kansas City, Mo., for a system of water works and electric lights.

**Portland, Ore.**—City will lay a complete system of 8-inch mains in Waverleigh Heights; cost, \$32,747; also mains in Multnomah street; cost, \$13,585.

**Ambridge, Pa.**—Water Committee has recommended an election on a bond issue for the erection of a municipal water plant to cost between \$125,000 and \$150,000; Committee is also considering the extension of water mains in various parts of the borough.—Thomas Pike, Chairman.

**Bethlehem, Pa.**—The Borough Water Committee has selected Alexander Potter, New York, as Consulting Engineer for the erection of the water plant at Illick's mill.

**Bradford, Pa.**—The Council is considering enlargement of No. 2 reservoir to hold 200,000,000 gallons.—A. F. Bannon, Jr., City Engineer.

**Butler, Pa.**—Citizens Mutual Water Company has decided to at once commence the erection of a reservoir with a capacity of 10,000 barrels of water; plans are being prepared by Gilbert Miller, City Engineer.



**Connellsville, Pa.**—For the purpose of putting an end for all time to the constant water shortage in the Youghiogheny Valley in the neighborhood of Smithton, the South Huntingdon Water Company is planning the erection of a big reservoir which will have a capacity of nearly 15,000,000 gallons; it is proposed to supply the towns of Smithton, Jacobs Creek and West Newton, as well as the mines of the Pittsburgh Coal Company in that neighborhood and the Baltimore & Ohio and Pittsburgh & Lake Erie Railroads; Engineer J. B. Hogg, of Connellsville, is preparing plans and specifications for the reservoir.

**Erie, Pa.**—Plans prepared for the intercepting sewer system in this city have met the approval of Governor Stuart, the Attorney General and the State Commissioner of Health, Dr. Samuel G. Dixon.—B. E. Briggs, City Engineer.

**Johnstown, Pa.**—Superintendent W. H. G. Ramsey, of the Johnstown Water Company, has announced that the plans for the construction of a mammoth reservoir on the Salt Lick had practically been completed and that the work of construction would begin about May 1.

**Kensington, Pa.**—Mill owners and manufacturers are urging a \$1,200,000 loan for the completion of the high pressure fire main service in the northeast.—W. T. Sykes, Thirty-seventh Ward, is interested.

**Lebanon, Pa.**—The Water Board has decided to lay a 20-inch pipe line from the supply dams at South Mountain to this city; cost, about \$140,000.—T. R. Crowell, City Engineer.

**Pittsburg, Pa.**—Council is considering an ordinance authorizing an issue of \$750,000 bonds to purchase additional pumps for the filtration plant.

**Reading, Pa.**—Council has passed ordinance directing Board of Public Works to lay a water main on Miltmore street.

**Stroudsburg, Pa.**—Application has been made for a charter of the Dingman's Ferry Water Company, and as soon as the sources of supply have been approved by the Engineer of the State Water Bureau work will be begun, and it is hoped to have the village supplied with water before the middle of July; eight springs have been procured about a mile distant, and at an elevation of 235 feet above the town, thus insuring ample pressure, and as the springs were not affected by the drought of last season there is little fear of lack of adequate supply; temporary officers are Philip F. Fulmer, Jr., Dingman's Ferry, President; Harry L. Briscoe, Secretary, and Warren Van Gorden, Secretary-Treasurer; plant will cost about \$5,000.

**Tamaqua, Pa.**—Councils have approved plans for a new \$26,000 reservoir.

**Wurtemburg, Pa.**—The Wurtemburg Water Company has been chartered to install a complete water system in this town; supply will be taken from the Slippery Rock Creek.—A. K. Little, A. A. Rothaus and A. H. McNamee, all of Pittsburg, Incorporated.

**Lexington, Tenn.**—Town is considering establishment of a water and light plant.

**Nashville, Tenn.**—The Legislative Committee on Charitable Institutions will recommend to the General Assembly a \$10,000 appropriation for a water and light plant.

**Atlanta, Tex.**—Citizens have voted \$15,000 bonds for the installation of a water works system.

**Austin, Tex.**—The Governor has signed bill authorizing the establishment of a water and light plant by the State for the State institutions in this city; appropriation, \$250,000.

**Hamlin, Tex.**—The Attorney General has approved the city's \$25,000 water works bond issue.

**Hillsboro, Tex.**—Citizens have voted \$12,000 bonds for improvement and extension of water works and sewerage system.

**Santa Anna, Tex.**—Citizens have voted \$25,000 water works bonds.

**Salt Lake City, Utah.**—City will expend \$208,020.99 on water main extensions.—L. C. Kelsey, City Engineer.

**Honaker, Va.**—City is contemplating the construction of water works.

**Richmond, Va.**—Committee on Streets, Water and Finance has recommended a \$1,150,000 bond issue for extension of water mains and sewers; of this amount \$132,333.50 will be used for water pipes.

**Chehalis, Wash.**—Council has received a bid on its \$175,000 bond issue of gravity water bonds that were voted some months ago, the bidder being J. A. Soderburg, of Seattle; Mr. Soderburg's bid as read indicated that a part of the work within the city in the way of local system extensions was not included; he proposed to build the gravity plant and take bonds for the work, advancing \$40,000, however, with which the city may buy the old plant and purchase right of way.

**Everett, Wash.**—County Commissioners have received a petition from the Everett Railway, Light & Power Company for a

franchise to lay a 16-inch water main; distance, about 6 miles.

**Oakesdale, Wash.**—Town is considering construction of water works.

**Tacoma, Wash.**—Council has adopted an ordinance for the construction of an 8-inch and 12-inch water main in District No. 540.

**Tacoma, Wash.**—The Commissioner of Public Works has submitted an estimate on cost of laying 12-inch and 20-inch cast-iron mains an Center street.

**Walla Walla, Wash.**—The Water Committee has recommended water main extensions on Isaac avenue and Melrose street; about 1,300 feet of 6-inch pipe will be laid at a cost of \$875.

**Clarksburg, W. Va.**—Citizens will vote at an early date on a water works bond issue.

**Wheeling, W. Va.**—City is considering the installation of a filtration system for the city's water supply; cost, about \$100,000.—Henry Schiebe, Chairman of Filtration Subcommittee on improvements to water works.

**Johnson Creek, Wis.**—Citizens have voted \$14,000 of water works bonds.

**Lovell, Wyo.**—Town will construct water works, to include 9,000 feet 6-inch and 13,000 feet 4-inch pipe, with valves and special fittings; a pump and engine will be purchased and a trench digging machine leased.—W. T. Lovell, Town Engineer.

**Estevan, Sask., Can.**—Citizens have voted to issue \$30,000 bonds for water works, \$10,000 for a trunk sewer and \$10,000 for a town hall.

**Peterborough, Ont., Can.**—Ratepayers have approved a bylaw to raise \$120,000 by debentures to build a new water works dam and increase the pumping capacity.

### BIDS RECEIVED AND CONTRACTS AWARDED

**San Francisco, Cal.**—The Board of Supervisors, Apr. 7, granted to the United States Iron and Pipe and Foundry Co. the contract for furnishing cast-iron pipe for the new auxiliary fire system; the contract price is \$920,988.56; an additional \$50,000 will be appropriated to cover freight charges.

**Antonio, Colo.**—Marshall Brothers, Las Animas, have secured contract for pipe line for the proposed water works for town of Antonio at \$16,122. Aug. Wissmath secured contract for reservoir at \$2,400.—C. B. Sampson, Conejos, City Engineer.

**Jacksonville, Fla.**—The following are the bids opened April 5 by the Board of Bonds Trustees for two four-stage centrifugal pumps: (a) 2,000 gallons capacity per minute (b) 2,500 gallons; D'Olier Engineering Company, Philadelphia, Pa., a \$8,300, b \$8,400; Snyder Pump & Well Company, Richmond, Va., a \$7,901, b \$7,077; Alberger Pump Company, New York, N. Y., a \$8,520, b \$9,088; Fred M. Prescott Pump Company, Milwaukee, Wis., a \$7,670, b \$9,200; De Laval Steam Turbine Company, Trenton, N. J., a \$8,700, b \$9,750; Buffalo Steam Pump Company, Buffalo, N. Y., a \$9,420, b \$9,980; R. D. Wood & Company, Philadelphia, Pa., a \$8,650, b \$10,000; Dayton Hydraulic Company, Dayton, O., b \$10,475; Allis-Chalmers Company, Milwaukee, Wis., a \$8,942, b \$10,678; Platt Iron Works, Atlanta, Ga., b \$10,840; Atlantic Hydraulic Machinery Company, New York, N. Y., a \$10,500, b \$13,500; Southern Hydraulic Engineering Company, Atlanta, Ga., a \$6,414, b \$6,680; Fore River Ship Building Company, Quincy, Mass., a \$7,636, b \$8,276; H. R. Worthington, Atlanta, Ga., a \$7,978, b \$8,920.

**Augusta, Ga.**—The Water Works Committee of Council has awarded the pump house contract to J. H. McKenzie Sons upon a 10 per cent commission basis; style of building has been changed, and instead of being erected so as to permit additional pumps in the future, it will be made only for the present needs.—Nisbet Wingfield, Commissioner of Public Works.

**South Bend, Ind.**—All bids opened by the Board of Public Works, April 9, for furnishing material and constructing reinforced concrete reservoir of 1,000,000-gallon capacity have been rejected, and new bids will be received.—A. J. Hammond, City Engineer.

**Eldora, Ia.**—The Smedley Steam Pump Co., of Dubuque, has been awarded a contract for a steam feed pump and heater, 100-horsepower, to work against 40 pounds pressure, for \$850. Other bid was: Platt Iron Works Co., Dayton, O., \$1,500.—H. G. Phillips, Superintendent.

**Jackson, Miss.**—The Board of Mayor and Aldermen are in the throes of selecting a 6,000,000-gallon high-pressure steam pump for the city water works, having received bids from eleven different firms, whose figures range all the way from \$14,220 to \$26,100. The manufacturers interested and represented in the bids are the Platt Iron

Works Company, Laidlaw-Dunn-Gardner Company, Allis-Chalmers Company, Prescott Steam Pump Company, Janesville Iron Works Company, It. D. Wood & Co., Philadelphia; H. R. Worthington, Hoover Owens Company, of Hamilton, O.; Wisconsin Engine Company, Snow Steam Pump Works, and Canton-Hughes Pump Company. Three of the concerns interested appear to have figured along the same lines, as their proposals are within \$500 of each other—between \$18,000 and \$19,000—while three are above \$20,000. The Board has shown its public spirit by deciding to lay the necessary water pipes to the encampment grounds of the national guard by using the chain gang, which will mean considerable in the general sum of expenditures if done by contract or by outside agencies.

**Kimball, Neb.**—Contract for constructing water works, bids opened April 4, has been awarded to Des Moines Bridge & Iron Company, of Des Moines, Ia., for \$14,000.—W. J. Davies, Village Clerk.

**Lyndhurst, N. J.**—Fritz & Partridge, who have offices at Dover, N. J., and Scranton, Pa., have received the contract for the extension of the water system.

**Salem, N. J.**—Council, April 8, by a vote of 5 to 3, gave contract for \$2,500 worth of additional work at the water plant at Quinton, which had been laid over from session to session for about two months, to Contractor George Pfeiffer, of Camden. This will include additional wells to assure an ample supply for all purposes.

**Woodbridge, N. J.**—The township will pay the Middlesex Water Company \$25 per hydrant at a reduced rate without interest; formerly the cost was \$30 per fire hydrant.

**New York, N. Y.**—The Coldwell-Wilcox Company, iron founders and machinists, of Newburg, have been awarded an important contract by the city for the construction of twin gates for the main aqueduct of the city, to be placed at Jerome Park, in the Borough of the Bronx; these gates will be constructed of iron and bronze and will be 6 feet 6 inches long by 14 feet in height, and it may be said that these gates will control the water supply for the entire Borough of Manhattan. They will be put in during the coming summer.

**New York, N. Y.**—The following are the bids opened on April 14 by John H. O'Brien, Commissioner Water Supply, Gas and Electricity, for furnishing and delivering drive well pipe (a) John Simmons Company, 110 Centre street, New York City; (b) W. J. Drummond & Company, 184 Broadway, New York City; (c) E. F. Keating, 446 Water street; 10,000 lineal feet of 20-inch pipe a \$1.70, b \$1.60, c \$1.48; 2,500 lineal feet of 8-inch pipe, a \$1.8298, b \$1.71, c \$1.48; 1,000 lineal feet of 8-inch pipe, a \$1.84, b \$1.84, c \$1.48; 500 lineal feet of 10-inch pipe, a \$1.36, b \$1.41, c \$1.1425; totals, a \$24,084, b \$23,525, c \$30,551.

**New York, N. Y.**—Bids were received and rejected April 8 by the Board of Water Supply for Contract 46, and for the construction of a portion of the Catskill aqueduct, consisting of Millwood, Sarles, Harlem Railroad, Pleasantville and Reynolds Hill tunnels, Putnam siphon and Millwood-South, Sarles and Pleasantville cut-and-cover. Tunnels are 17 feet high by 13.1-3 feet wide inside and aggregate about three miles. Of the remainder about 2.5 miles are standard cut-and-cover 17 feet high by 17 1/2 feet wide inside, and about 2,000 feet are cut-and-cover of special design. The work is located about four miles east of the Hudson River in the towns of New Castle and Mount Pleasant, Westchester County. The bids follow: Booth & Flynn, Pittsburg, Pa., \$2,598,260; Buffalo Dredging Company, Buffalo, N. Y., \$3,161,555; Degnon Contracting Company, 60 Wall street, \$3,309,695; Gore-Meanan Company, 206 Broadway, \$2,864,035; George W. Jackson, Inc., Chicago, Ill., \$2,780,880; American Pipe & Construction Company, Philadelphia, \$2,695,495; Bradley Contracting Company, 1 Madison avenue, \$2,710,555; J. H. Gray Company, Fuller Bldg., \$2,600,735; Mason-Hanger Company, Richmond, Ky., \$2,688,878; John C. Rodgers, 121 West 125th street, \$3,121,436.

**New York, N. Y.**—The Board of Water Supply, April 12, awarded contract to the American Pipe & Construction Company, 112 North Broad street, Philadelphia, Pa., at \$1,558,695, for contracts Nos. 17 and 18 combined, for the construction of about 14,000 lineal feet and about 15,600 lineal feet, respectively, of plain concrete conduit, known as cut-and-cover aqueduct, 17 feet high by 17 1/2 feet wide inside. The work is located in the towns of Shawangunk, Ulster County, and Montgomery, Orange County, about 8 miles northwest of Newburg. Bids or proposals were asked for either or both contracts separately and for both contracts combined, any bidder to make a bid for either contract, or for both contracts combined.

**Rochester, N. Y.**—Contracts for the lay-

ing of water mains in Oneida street, Turner avenue and Wanmer street were awarded to Thomas R. Crane at 28 cents per lineal foot for 8-inch pipe and 24 cents for 6-inch pipe. Beckwith Brothers bid 32 cents per foot for the pipe of both sizes. J. H. Clements & Son also entered a bid.

**Rochester, N. Y.**—When the Board of Contract and Supply recently opened bids for furnishing corporation cocks to the Water Bureau for 1909, it was found that precisely the same prices were bid by the Mueller Manufacturing Company, of New York, and Samuel Sloan & Co., of Rochester. These cocks are of varying sizes and differ in price from 47 cents each to \$12.29. The contract was let to the Rochester company.

**Canton, N. C.**—City has awarded contract to M. H. Kelly, Asheville, to construct water and sewer systems at Canton; water to be secured from mountain stream near city.—J. N. Mease, Mayor.

**Toledo, O.**—The Board of Public Service awarded contracts April 11 as follows: To the Wickes Boiler Company, Saginaw, Mich., for pipe needed in filtration work contract for about \$7,557; Norwood Engineering Company, Florence, Mass., for special castings, \$1,825, and the United States Cast Iron Pipe & Foundry Company, for specials, \$3,370.

**Lindsay, Okla.**—Contracts were awarded as follows on April 2 by the Town Trustees for water works construction: To Briggs-Weaver Machinery Company, Dallas, Tex., all machinery, at \$4,590; to Chicago Bridge & Iron Works, tank and tower, at \$4,140;

to Central Foundry Company, New York, water mains, 4-inch, 41 cents; 6-inch, 63 cents; 8-inch, 86 cents.

**Philadelphia, Pa.**—Director Stearns officially announced the award of the Queen Lane filter contract to the Millard Construction Company; Mayor has signed the ordinance providing \$800,000 for the preliminary work passed by Councils; project will eventually cost about \$2,225,000.

**Pittsburg, Pa.**—The Simplex Valve & Motor Company, of Philadelphia, has secured the contract to furnish for the city ten 6,000,000-gallon rate controllers; also a 36-inch Simplex Meter.

**Nashville, Tenn.**—One of the largest contracts awarded by the Board of Public Works in a long time was that received by J. H. Fall & Company for 1,837 tons of cast iron pipe for the West Nashville water main; the bid of this company for the United States Cast Iron Pipe Company was \$22.65 per ton, which is considered a very high price to have to pay for the pipe when pig iron is at its present figure. The contract was awarded once before, it will be remembered, to Howard Motz & Company, for \$18.97 per ton. This firm failed to make good on its contract, claiming that the trust prevented them from doing so by failing to carry out previous quotations on pipe. It had been expected that quotations on pipe would be much lower by this time, but the full figure of \$22.65 had to be paid. This will make the lot of pipe cost the city over \$7,000 more than it would have done had the local firm been able to make good on its bid. The total amount of the con-

tract is \$41,608.05. It calls for 1,041 tons of 18-inch pipe, 586 tons of 16-inch and 210 tons of 6-inch. Delivery must begin in sixty days and be completed in ninety days.

The board has also let water main contract for East Nashville to Sullivan & Haggerty. The bids were as follows: E. T. Lewis, \$6,642.74; David Grewar, \$6,628.50; Sullivan & Haggerty, \$5,811.37; John Broderick, \$6,077. The contracting firm will begin work right away.

**Hubbard, Tex.**—G. T. Blackford, Knoxville, Tenn., has been awarded a contract to build a new city water works system and electric light plant for Hubbard which has approximately 12,000 population; there were nineteen bidders and the Knoxville contractor bid \$499,550 and was given the contract. The bid submitted which was the closest to that of Mr. Blackford, was \$500,000; Hubbard is the central point of five townships, and this new plant will serve all five of the towns.

**Chehalis, Wash.**—John A. Soderberg, of Seattle, has secured contract for constructing a gravity system of water works; probable cost, \$175,000.

**Tacoma, Wash.**—The following bids were opened April 3 by H. J. McGregor, Commissioner of Public Works, for construction of standpipe on Fletcher Heights: Northwest Bridge Company, Tacoma, \$12,503 (awarded contract); Pacific Engineering Company, \$13,964; Des Moines Bridge & Iron Company, Des Moines, Ia., \$13,581; Western Steel Plate Construction Company, \$14,767; S. D. Brear & Son, \$14,434;

**New York, N. Y.**—Bids were received by the Board of Water Supply, March 30, for Contract 25, for the construction of Croton and Chadeayne tunnels, Kitchawan and Millwood North cut-and-cover, and a portion of Croton cut-and-cover, in the Croton Division of the Catskill Aqueduct, in the town of Yorktown and New Castle, Westchester County. Itemized bids were as follows: (A) Chas. W. Blakeslee & Sons, 58 Waverly street, New Haven, Conn. (awarded contract); Booth & Flynn, Ltd., 1942 Forbes street, Pittsburg, Pa.; (C) The M. A. Talbott Company, 1110 American Building, Baltimore, Md.; MacArthur Bros. Co., 11 Pine street, New York; (E) Bradley Contracting Company, 1 Madison avenue, New York; (F) American Pipe and Construction Company, 112 North Broad street, Philadelphia, Pa.; (G) J. H. Gray Company, 2019 Fuller Building, New York; (H) Foye-Root Company, 20 Broad street, New York; (I) John J. Hopper, 215 West 125th street, New York; (J) average bid.

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
57,000 cu. yd. removal of top-soil.....	\$0.40	\$0.45	\$0.40	\$0.55	\$0.50	\$0.40	\$0.50	\$0.75	\$0.74	\$0.52
30,000 cu. yd. open-cut excav., Sta. 214 + 50 to Sta. 225, Type A.....	.60	.80	.70	.65	.95	.60	1.00	.90	1.11	.81
124,000 cu. yd. open-cut excav., Sta. 225-277, Type A.....	.55	.80	.75	.54	.85	1.25	.80	.90	.83	.81
10,000 cu. yd. open-cut excav., Sta. 277-285, Type B.....	.50	.80	.90	.45	.80	.65	.75	.90	.72	.72
41,000 cu. yd. open-cut excav., Sta. 285-290, Type A.....	.55	.80	1.00	●	.80	.65	1.00	1.00	1.62	.89
58,000 cu. yd. open-cut excav., Sta. 297-325, Type A.....	1.00	1.00	1.50	1.15	1.10	1.65	1.15	1.25	1.74	1.28
22,000 cu. yd. open-cut excav., Sta. 325-340, Type A.....	1.30	1.40	1.25	1.80	1.30	1.20	1.40	1.25	2.56	1.49
29,000 cu. yd. open-cut excav., Sta. 340-365, Type B.....	1.00	1.40	1.25	1.35	1.10	1.25	1.00	1.50	1.58	1.27
24,000 cu. yd. open-cut excav., Sta. 365-384, Type A.....	1.20	1.40	1.25	1.65	1.40	1.75	1.40	1.50	2.50	1.56
16,000 cu. yd. refill. and embank., Sta. 214 + 50 to Sta. 225.....	.35	.30	.30	.34	.50	.30	.30	.40	.45	.36
45,000 cu. yd. refill. & embank., Sta. 255-277.....	.35	.30	.25	.34	.50	.30	.30	.40	.45	.35
7,000 cu. yd. refill. & embank., Sta. 277-285.....	.35	.30	.25	.34	.50	.30	.30	.40	.45	.35
11,000 cu. yd. refill. & embank., Sta. 285-290.....	.35	.30	.40	.34	.50	.30	.30	.40	.45	.37
37,000 cu. yd. refill. & embank., Sta. 297-325.....	.35	.30	.30	.34	.50	.30	.30	.40	.76	.39
24,000 cu. yd. refill. & embank., Sta. 325-340.....	.40	.30	.50	.40	.50	.30	.30	.40	.76	.43
30,000 cu. yd. refill. & embank., Sta. 340-365.....	.40	.30	.40	.40	.50	.30	.30	.40	.76	.42
25,000 cu. yd. refill. & embank., Sta. 365-384.....	.40	.30	.40	.40	.50	.30	.30	.40	.76	.42
30,000 cu. yd. surface dressing and grassing.....	.45	.40	.60	.50	.60	.40	.60	.40	.63	.51
59,000 cu. yd. concrete masonry for aqueduct in open cut and on embankment.....	5.10	5.50	5.00	5.25	5.00	5.25	5.50	5.00	4.90	5.17
1,500 cu. yd. concrete masonry for culverts, retaining-walls, etc.....	5.35	5.00	7.00	6.00	7.00	6.00	7.00	6.00	7.86	6.36
100 cu. yd. rubble masonry & pav. in mort.....	5.00	5.00	5.00	5.00	4.50	4.00	5.00	5.00	5.82	4.92
600 cu. yd. dry rubble mason. and paving.....	4.00	3.00	3.00	4.00	4.00	3.00	4.00	3.00	5.82	3.76
6,000 cu. yd. crushed stone, gravel and material for filters.....	1.80	1.50	1.50	2.00	1.50	1.50	2.25	2.50	3.65	2.02
300 cu. yd. surfacing macadam roads.....	2.50	3.00	2.00	1.70	3.50	2.50	3.00	3.00	6.55	3.08
4 sluice-gates.....	100.00	100.00	150.00	100.00	100.00	100.00	125.00	150.00	330.00	139.44
2 tons c. i. pipes and special pipe casting.....	100.00	80.00	125.00	100.00	100.00	100.00	100.00	100.00	300.00	122.78
3,000 lin. ft. vitrified pipe.....	1.35	.60	1.50	1.35	1.00	1.50	1.50	1.60	1.60	1.33
60 M. ft. B.M. timber and lumber.....	50.00	50.00	60.00	65.00	50.00	60.00	60.00	60.00	63.00	57.56
5 testing portions of aqueduct.....	850.00	1,000.00	1,000.00	1,000.00	500.00	500.00	1,000.00	500.00	1,175.00	836.11
1,000 lin. ft. testing portions of aqueduct exceeding 200 ft. in length.....	2.75	2.00	2.00	2.70	2.00	1.00	1.50	3.00	5.82	2.53
40,000 cu. yd. rock excavation in tunnel.....	5.95	5.50	5.25	6.00	5.00	6.00	6.30	6.00	7.30	5.92
500 sq. yd. additional trimming in tunnel.....	5.00	3.00	4.00	5.50	6.00	7.00	5.00	6.00	5.00	5.17
400 cu. yd. earth excavation in tunnel.....	4.25	3.50	6.00	6.00	4.00	7.00	4.00	5.00	4.70	4.94
100 cu. yd. enlarg. of tun. sec. in earth.....	10.00	10.00	15.00	15.00	6.00	10.00	20.00	7.00	44.00	15.22
50 M. ft. B.M. permanent timber. in tun.....	60.00	60.00	70.00	70.00	50.00	70.00	50.00	70.00	90.00	65.56
50 M. ft. B.M. temporary timber. in tun.....	50.00	50.00	60.00	55.00	50.00	70.00	45.00	70.00	90.00	60.00
3,700 lin. ft. tunnel drainage.....	1.25	1.00	1.50	1.25	2.00	1.00	1.50	3.00	1.90	1.60
3,700 lin. ft. forms for masonry lin. in tunnel.....	3.00	2.50	3.70	4.00	4.00	3.00	4.00	3.50	3.80	3.61
11,000 cu. yd. concrete masonry in tunnel.....	5.65	5.50	5.50	5.25	6.00	5.10	6.60	5.50	6.00	5.68
500 cu. yd. excess conc. masonry in tunnel.....	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
50 cu. yd. brick masonry in tunnel.....	14.00	15.00	20.00	20.00	25.00	15.00	20.00	20.00	26.00	19.44
1,500 lin. ft. dry packing.....	2.50	2.00	2.00	3.50	3.00	2.50	2.50	2.50	2.90	2.60
150 lin. ft. drilling holes in rock or masonry.....	.70	.40	1.00	.50	.50	.60	1.00	.50	2.20	.82
400 lin. ft. steel pipes for grouting.....	.70	.20	.50	.40	.50	.30	.40	.30	.50	.42
97,000 lbs. Portland cement.....	1.68	1.60	1.80	1.45	1.60	1.60	1.56	1.70	2.30	1.70
100 cu. yd. grout of Portland cement.....	6.00	5.00	8.00	8.00	4.00	10.00	8.00	7.00	14.55	7.840
32,000 lin. ft. stone boundary walls.....	1.15	.75	1.00	1.10	1.00	.80	1.00	1.25	1.46	1.06
8,000 lin. ft. fences and guard-rails.....	.50	.30	.30	.30	.40	.30	.40	.50	.36	.370
50,000 lbs. steel for reinforcing concrete.....	.04	.03	.05	.05	.04	.04	.04	.05	.04	.042
5,000 lbs. wrought iron, cast iron and steel.....	.09	.06	.10	.10	.10	.08	.08	.10	.15	.095
500 lbs. bronze.....	.85	.80	.75	1.00	1.00	.85	.65	.75	.58	.80
4,000 lbs. galvanizing.....	.04	.03	.12	.04	.01	.05	.05	.10	.075	.057
52 month med. and sur. practitioners.....	200.00	150.00	100.00	250.00	200.00	100.00	150.00	200.00	330.00	186.66
225 month sanitary services.....	225.00	400.00	100.00	250.00	300.00	100.00	200.00	200.00	255.00	231.11
Cleaning up (lump sum).....	3,000.00	3,000.00	3,000.00	4,000.00	3,000.00	3,000.00	2,500.00	3,000.00	14,500.00	4,333.33

Total..... \$1,269,830 \$1,303,720 \$1,320,995 \$1,322,630 \$1,334,615 \$1,377,085 \$1,383,455 \$1,418,370 \$1,735,429  
Time: 52 months. Bond required: \$300,000.



Chicago Bridge & Iron Company, \$13,013; Gawley Foundry & Machinery Company, \$13,665, and Wells Construction Company, \$14,114.

**Richland Center, Wis.**—The U. S. Cast Iron & Foundry Company, Chicago, Ill., has been awarded a contract for furnishing 4-inch c. i. pipe for \$27.50 per ton; 8 and 10-inch pipe, \$26.50; specials, 3% cents per pound. The Rensselaer Mfg. Company, Troy, N. Y., was awarded a contract for 3 4-inch gate valves for \$22.95; 1 6-inch, \$12.60; 4 8-inch, \$75.60 and 1 10-inch, \$26.10. —Reuben Sutton, City Clerk.

**Winnipeg, Man., Can.**—The Northern Electric & Manufacturing Company, city, has been awarded a contract for one 2,500-gallon turbine motor pump, 300 horsepower, to pump against heat of 125 guaranteed over all efficiency of 63.7 per cent. for \$11,000. Other bids were Drummond McCall Company, \$13,500; Camden Iron Works, \$17,075 and \$17,200; Ries Rotunbo, Wolverhampton, England, \$6,473 and \$7,787; Allis-Chalmers, Bullock, Winnipeg, \$17,867; Watson Stillman Company, Montreal, \$13,785; Bain & Mitchell, Montreal, \$11,500 and \$12,000.

## LIGHTING AND POWER

**Fort Payne, Ala.**—E. C. Drew, Monroe, La., is considering construction of power plant on Wills Creek for generating electricity.

**Batesville, Ark.**—City will install 250-hp. Corliss engine and 250-amp. dynamo in electric light and water plant; cost, \$6,000.

**Phoenix, Ariz.**—The Pacific Gas and Electric Company will erect a \$12,000 power house; machinery will be installed at a cost of \$75,000.—F. H. Ensign, Phoenix, Manager.

**Redlands, Cal.**—City Trustees have received petitions for arc lights at corners of Orange street and Stuart avenue and Orange street and Pearl avenue; also on Walnut avenue and San Jacinto street.

**Sacramento, Cal.**—The Artificial Lights Committee of the Supervisors is considering the installation of 32 arc lights in the Richmond district.

**San Francisco, Cal.**—The Down Town Association is considering the placing of 75 ornamental posts on Market street.

**Washington, D. C.**—Representatives of the North Capitol and Eckington Citizens Association are urging the District Commissioners to replace the gas lamps now in use on North Capitol street with electric arc lamps.—W. G. Henderson and H. E. Blaus are interested.

**Washington, D. C.**—District Commissioners have \$3,500 available for street lighting extension.—W. C. Allen, Electrical Engineer.

**Jacksonville, Fla.**—The Budget for 1909 contains an item of \$35,500 for public lighting.

**Miami, Fla.**—The Miami Electric Light and Power Company has been incorporated with a capital of \$50,000.—J. R. Parrott, Jacksonville, President.

**Sarasota, Fla.**—City has granted franchise to H. P. Porter and associates for electric light plant.

**Starke, Fla.**—Council will make improvements to the municipal electric light and water plant, including the following machinery: One 100-kw. generator, 150-hp. boiler, engine, etc.; cost, \$12,000.—William R. Collier, Atlanta, Ga., Consulting Engineer; W. L. Wall, Superintendent.

**Fitzgerald, Ga.**—The Fitzgerald & Ocella Electric Railway and Power Company will build electric plant on Lake Beatrice to furnish power for 12-mile railway and electricity for lighting.—C. A. Holtzendorf, General Manager, city.

**Valdosta, Ga.**—Citizens have voted \$50,000 bonds for an electric plant; for street lighting in connection with water works; extension of water works and sewers and extension of streets.

**Pocatello, Ida.**—The Bear Lake Power Company will erect a new power house and install new equipment.—Bannock Engineering Company, Ltd., Pocatello, Engineers.

**Crawfordsville, Ind.**—Council is planning to erect a municipal central heating plant; plans have been prepared.—H. B. Hulett, City Clerk.

**South Bend, Ind.**—The Manufacturers' Utility Company will construct water and electric power plants along the St. Joseph River and sell or lease power to manufacturers.—R. U. Miller, John Thomas and August Nelson, Directors.

**Grinnell, Ia.**—City has granted O. B. Matthews a gas franchise.—L. D. Kemmer, Mayor.

**Ft. Scott, Kan.**—The Ft. Scott Gas and Electric Company has been reorganized to rebuild power plant and make some alterations in electrical apparatus.

**Colfax, La.**—Bids are being advertised for the drilling of a well; \$2,000 is available for gas purposes.—Capt. C. H. Teal is interested.

**Calais, Me.**—The International Power

Company has made application to the New Brunswick Parliament for a charter; company will construct a dam on the St. Croix River half way between Baring and Woodland, where a site has been secured; water power will be utilized to generate electricity which will be used for commercial purposes.—George A. Curran and I. R. Todd are promoters.

**Hagerstown, Md.**—Pennsylvania capitalists have purchased the water rights at the mouth of the Antietam Creek, the site of the old Antietam Iron Works, below Sharpsburg, this county, and propose erecting there an electric light and power plant for the operation of an electric railway over the Antietam Battlefield.

**Oakland, Md.**—The West Virginia and Maryland Gas Company has made an offer to the town officials to extend its service to this city if a sufficient number of the citizens and business people would agree to take the gas; enough subscribers have been secured to assure the gas line.

**Malden, Mass.**—The Aldermen have appropriated \$32,500 for street lights and \$500 for the placing of several new arc and incandescent lights on various streets.

**North Adams, Mass.**—A power plant to furnish electricity for lamps will be installed at the Blackinton Mills; an auxiliary steam plant will also be installed.

**Spencer, Mass.**—Town has appropriated \$4,500 for street lighting.

**Sterling, Mass.**—Selectmen have granted a franchise to the Connecticut Power and Transmission on the understanding that the company shall furnish power to Sterling at the rate of 2½ cents per kilowatt-hour.

**Bessemer, Mich.**—The Bessemer Gas Company has been formed; capital, \$50,000.—J. J. Kaufman, Secretary.

**Detroit, Mich.**—G. W. Graves, Architect, Cleveland Bldg., has prepared plans for a power house to cost about \$50,000 for a manufacturing firm.

**Grand Rapids, Mich.**—The Grand Rapids Gas Light Company will expend about \$50,000 in the extension of gas mains; company will lay about ten miles of gas mains this summer.—B. O. Tippy, Vice-President and General Manager.

**Hillsdale, Mich.**—Council is considering improvements to the municipal electric light plant; cost, about \$10,000.—H. C. Clark, Manager.

**Ironwood, Mich.**—City has granted franchise for a gas plant to Andrew Pyfe, of Grand Rapids, and Henry M. Wallace, of Detroit.—W. D. Snyder, City Clerk.

**Anoka, Minn.**—Wm. P. Cowles, Minneapolis, has prepared plans for the improvement of electric light and water works plant.

**Fergus Falls, Minn.**—Citizens have voted an issue of \$5,000 bonds for additional electric lights.—G. H. Gard, City Clerk.

**Macon, Miss.**—City has voted to issue \$20,000 bonds to improve water and light plant, to include additional electrical unit and motor-driven pumps; a high-potential line will probably be run to Brooksville, supplying that town with current.—G. B. Baskerville, Jr., Superintendent City Water and Light plant.

**Plainview, Neb.**—City will grant a franchise for installing an electric light plant.—H. J. Nelson, City Clerk.

**Bridgeton, N. J.**—Council has appointed a Committee to inquire into feasibility of establishing a municipal lighting plant.

**Jersey City, N. J.**—The Monticello Avenue Business Men's Association has decided to convert Monticello avenue into a White Way.—H. B. Peck, Secretary.

**Perth Amboy, N. J.**—Chairman Crouse of the Committee on Power has recommended the installation of a new and larger dynamo at Runyon.

**Tuckahoe, N. J.**—The Tuckahoe Light and Fuel Company, recently formed, has secured a charter for a town lighting plant.

**Nambe, N. M.**—E. H. Fisher, of Cimarron, N. M., is considering the development of water power of the Pecos and Nambe rivers, and will erect two power plants with a total output of 5,000 horsepower; cost, about \$500,000.

**Santa Fe, N. M.**—Territorial Engineer Vernon L. Sullivan has approved the application of Ernest H. Fischer, Civil Engineer of Cimarron, Colfax County, for the diversion of the waters of the Pecos River and Holy Ghost Creek, 30 miles east of Santa Fe, for power purposes; power house is to be erected just below the mouth of the Macho and will develop 4,500 horsepower to supply current to Albuquerque, Santa Fe and Las Vegas; pipe line 5.4 miles long and five feet in diameter to connect with a concrete ditch which will carry the water, is part of the project which altogether calls for an expenditure of \$450,000.

**Albany, N. Y.**—The Public Service Commission has granted the Dwass Electric Company permission to erect a power plant at Clifton Park, under a franchise given by the Round Lake Association, and the company is given authority to issue capital stock to the amount of \$20,000; Commission

has also given to the Corinth Electric Light and Power Company, of Corinth, Saratoga County, permission to purchase from Warren Curtis, Jr., the power station, dam and rights for an electric lighting plant for the village of Corinth; company is authorized to issue capital stock to the amount of \$25,000.

**Baldwinsville, N. Y.**—The Board of Village Trustees has not yet selected an Engineer for proposed municipal light plant.—Joseph Hines, President.

**Fulton, N. Y.**—The Niagara - Oswego Power Company has been incorporated to furnish light and power; company will have offices and a transforming station in this city.—S. B. Storer, President, Syracuse; M. S. Powell, Vice-President, Fulton, and E. M. White, Secretary, Phoenix.

**Waddington, N. Y.**—The Directors of the New York and Ontario Power Company have ordered the sale of \$1,850,000 bonds; proceeds are to be used in developing water power at Waddington, N. Y.; company proposes to replace the present wooden and stone dam extending 600 feet from the shore to the island with a concrete dam; cost, \$2,000,000.

**Asheville, N. C.**—City has granted a franchise to Geo. E. Ladshaw, Gabriel Cannon and A. L. White, Spartanburg, S. C., for the building and operation of a \$250,000 power plant at Potts Shoals, on Green River; offices of the company will be at Hendersonville.

**Columbus, O.**—The Board of Service has called for bids for a new \$25,000 generator for the electric light plant.

**Cuyahoga Falls, O.**—The Board of Public Works is considering improvements at the municipal light plant; about \$7,000 is needed.—W. A. Clapp, President Board.

**Massillon, O.**—The Massillon Electric and Gas Company has petitioned Council for a franchise to construct and maintain light, heat and power systems.

**Richwood, O.**—Council has decided to hold an election May 10 to decide whether town shall issue \$15,000 for a municipal light plant or have one operated by private ownership.

**Minco, Okla.**—City will let contracts very soon for construction of an electric light plant and water works system; estimated cost, \$25,000.

**Freemansburg, Pa.**—The Light Committee has been authorized to secure bids for the lighting contract which expires in May.

**Green Ridge, Pa.**—Council has decided to install electric lights at eight locations.

**Harrisburg, Pa.**—Council has decided to install 2,000-candle-power arc lights at Seventeenth and Hunter and at Reese and Crescent streets.

**Johnstown, Pa.**—The Finance Committee is considering a \$24,000 appropriation for street lighting.

**Philadelphia, Pa.**—Congress has appropriated \$172,600 for the completion of the central power plant in the Navy Yard at League Island; plans have been prepared by R. C. Hollyday, Chief of Bureau of Yards and Docks, Navy Department; the appropriation is available July 1.

**Scranton, Pa.**—Council is considering an ordinance authorizing the Director of Public Works to advertise for bids for furnishing street lights, either gas or electric, for a period of ten years from March, 1910; in the case of a new company submitting a bid, the time for the installation of a new plant shall be stated.—Albert Davis, Chairman Light Committee.

**Wilkes-Barre, Pa.**—As soon as a report on the light contract has been received from Engineer Maxwell, bids will be advertised for a street lighting contract.

**Spartanburg, S. C.**—Ladshaw, White & Cameron, of Spartanburg, will construct a power plant on Green River to furnish 50,000 horsepower.

**Erwin, Tenn.**—Toney & Kirkpatrick will develop water power property; details not yet prepared.

**Greenville, Tenn.**—P. C. Ottinger is interested in plan to construct water power electrical plant on French Broad River.

**Lexington, Tenn.**—Town is considering establishment of a lighting and water plant.

**Nashville, Tenn.**—The Legislative Committee on Charitable Institutions will recommend to the General Assembly a \$10,000 appropriation for a light and water plant.

**Austin, Tex.**—The Governor has signed a bill authorizing the establishment of a light and water plant by the State for the State institutions in this city; appropriation, \$250,000.

**Dallas, Tex.**—The Deere Park Improvement League is urging the extension of gas mains into the Deere Park addition.

**Flaton, Tex.**—Paulus & Rhodes are considering installation of electric light plant.

**Fort Worth, Tex.**—The Fort Worth Light and Power Company will petition Tarrant County Commissioners' Court to grant 25-year franchise to furnish Glenwood, Polytechnic Heights and Sycamore Heights with electric lights and gas.—J. C. Lord, Superintendent.

**Fort Worth, Tex.**—Citizens have voted for the enlargement of the city's electric plant.

**Randolph, Utah.**—The Randolph Utility and Power Company, of Randolph, has been incorporated to furnish power for private and public use in Rich County; capital, \$10,000.—A. E. Wing, Secretary.

**Bristol, Va.**—City is considering the purchase of electric light and power plant.

**Lynchburg, Va.**—E. R. Monroe is promoting the organization of a company to develop a 5,000-hp. hydro-electric plant; dam will cost \$300,000; company will transmit the power to Lynchburg, Alta Vista and Brookneal.

**Burlington, Vt.**—Mayor J. E. Burke has recommended the purchase of an electric motor for the lighting plant.

**Pennsboro, W. Va.**—The Consolidated Electric Company, Pittsburg, Pa., has petitioned for a franchise for a light and power plant.—J. E. Cunningham, City Recorder.

**Wheeling, W. Va.**—City will install lights on High, Fourth and Metuchen streets.

**Beloit, Wis.**—The Beloit Water, Gas and Electric Company will extend its system for the purpose of furnishing electrical service to manufacturing plants, particularly to the metal working industries.—B. F. Lyons, Acting Manager, Beloit.

**Kenosha, Wis.**—The Kenosha Electric Railway Company is planning to proceed at once to secure from the State Railroad Commission a certificate of convenience and necessity which will make it possible to build a commercial lighting plant which will be a competitor of the Kenosha Gas and Electric Company.—Manager Loughridge.

**La Crosse, Wis.**—Citizens have voted to build a municipal electric light plant.

**Cody, Wyo.**—Town is considering installation of a gravity water system.

### BIDS RECEIVED AND CONTRACTS AWARDED

**Pasadena, Cal.**—Contracts were filed with the B. F. Kierulff Company for lighting poles and with the F. C. Sweetser Company, of Pasadena, for wire and material costing \$14,980.

**Redding, Cal.**—Only one bid to furnish lights and power was presented to the Board of Trustees April 5, being from the Northern California Power Company, which offered to furnish street arc lights for \$3.95 a month on a ten years' contract; the Sacramento Valley Power Company, which is a consolidation of the Shasta Power Company and the Northern Light and Power Company, did not make any offer.

**Sacramento, Cal.**—The Board of Trustees has awarded the contract for furnishing and installing the pumps and apparatus for the municipal water plant to the Doak Gas Engine Company, at \$5,600; the pumps may be operated by either steam or electricity.

**Washington, D. C.**—Bids for lighting the streets by gas and naphtha lamps were opened at the District Building, and the present contractor, the American Street Lighting Company, offered to furnish gas lighting at a rate 5 cents lower per lamp per annum than is at present paid.

**Chicago, Ill.**—The Commonwealth-Edison Company was awarded contracts for the construction of two substations to the E. P. Stranberg Company, 159 La Salle street, for \$54,000; one of the stations will be located at Grand Crossing and the other at 9345 South Chicago avenue.

**Caffin, Kan.**—Contracts have been awarded by E. R. Ruck for construction of an electric light plant and equipment, which will include a 22-hp. Weber gasoline engine and a Westinghouse direct-current generator.

**Fort Riley, Kan.**—Contract for extensions to lighting system has been awarded to R. L. Sparks, Long Building, Kansas City, Mo., for \$5,600.—Captain W. M. Whitman, Corps Engineer, United States Army.

**Ottawa, Kan.**—A contract for a big 16-inch line connecting the gas fields with Kansas City has been let by the Kansas Natural Gas Company. The line must be completed by October 15; it will cost three-fourths of a million. It is assumed the line will extend from Ottawa to the heart of the gas territory. Work will begin in about the center of the route and will be pushed both ways. As soon as the pipe is received excavating will begin.

**Boston, Mass.**—Mayor George A. Hibbard has attached his signature to a contract submitted by the Edison Illuminating Company for the lighting of the city for a period of five years for \$380,000 a year; this was made with the understanding that the Mayor can change the contract to one of a period of 10 years any time within the next six months; Mayor by this arrangement gives the electric people an opportunity to develop their lighting system

during the next six months, and if such improvements are made by that time to warrant it, the contract will be changed to a 10-year one; the contract signed gives the street lighting for \$55,000 less than it costs the city at present for lighting. It is hoped that sufficient improvement will be made during the six months to allow a still lower rate.

**International Falls, Minn.**—The Minnesota and Ontario Power Company let contract for the equipment of its hydro-electric plant at International Falls to J. G. White & Co., 49 Exchange place, New York, N. Y.; the plant at first will be equipped to generate about 20,000 horsepower; provision will be made to install another unit later; the plant will furnish power to a large paper mill and other manufacturing plants; it is expected to have the plant in operation by January 1, 1910.

**Hattiesburg, Miss.**—The Hattiesburg Traction Company has awarded contract to Electrical Installation Company, Chicago, Ill., for erection of \$150,000 power plant; equipment to be installed will be capable of developing 1,000 kilowatts; building to be of brick.—C. Z. Stevens, General Manager of Hattiesburg Traction Company.

**Seabright, N. J.**—It will cost the borough, with its newly annexed territory, \$13,228.75 for borough lighting for the next five years, or \$2,645.75 annually, according to a contract awarded by the Mayor and Council; the borough has been paying \$95 for arc lights and \$15 each for 16-candle power lamps; in the new contract the cost of arc lights was reduced to \$85 each, while the smaller lights were doubled in power at the small increase of \$5 per light per year; the borough will burn 25 arc and 43 Tungsten 30-candle power lights. In making a five-year contract the borough receives a discount of five per cent annually, while the terms to consumers, 12 cents per kilowatt, are fixed for the next five years. The price to consumers is five cents less than is charged in Long Branch. The lights, according to contract, are to burn from a half hour after sunset to a half hour before sunrise. The borough, in addition, will receive free lights for Town Hall, jail and engine house.

**Sea Isle City, N. J.**—City has entered into a gas plant contract with William Boardman, of Philadelphia, the latter agreeing to furnish gas at \$1.50 per 1,000 feet.

**Rochester, N. Y.**—The Standard Underground Cable Company was awarded the contract for 7,000 feet of armored cable at \$1.19 a foot for eight-conductor and \$.219 for twenty-conductor cable.

**Grand Forks, N. D.**—The Board of Regents of the North Dakota University has let the contract for the construction of the new power house to Contractors Melby & Standahl, of Grand Forks, while the contract for the erection of the 125-foot concrete smoke stack was let to Alphonse Costevin, of Chicago. The bids for the power house were as follows: Dinnie Bros., \$8,355; with smokestack, \$9,795; K. C. Hunter, \$8,939; with smokestack, \$10,264; Melby & Standahl, \$8,273; with smokestack, \$9,513; Geo. W. Buckingham, \$9,514; with smokestack, \$10,784; Northern Construction & Engineering Company, \$8,497; with smokestack, \$9,897.

**Lima, O.**—The ordinance to renew the street lighting contract with the Lima Gas Light Company, the new contract to be in effect for a period of ten years, has been passed by the full yeas vote of the Council; the ordinance fixing the rates to be charged by the gas company for illuminating gas furnished was also adopted.

**Chester, Pa.**—The Contract for lighting the City Hall was awarded to the Beacon Light Company over the Suburban Gas Company by a unanimous vote; for many years the gas company has had the contract for furnishing the lights at the hall and held full sway, and although each of the companies made the same bid of \$400 for furnishing the lights for the year it was awarded to the Beacon Light Company without a dissenting vote.

**Calvert, Tex.**—Council has awarded the Calvert Water, Ice and Electric Light Company a contract for street lighting. It is stated that the company will erect a new electric light plant.—George Volle, Calumet, Manager.

### FIRE EQUIPMENT

**Ross, Cal.**—City Trustees will bond the city for \$10,000 to defray the expenses of equipping a fire department with modern apparatus.

**Sunnyvale, Cal.**—Citizens have voted to issue \$2,000 bonds for the purpose of improving fire department and installing fire hydrants.—G. T. Balch, Fire and Police Committee.

**Bristol, Conn.**—Plans have been prepared for the erection of a fire house on Laurel street.

**Naugatuck, Conn.**—Town will erect a hose house on Maple street; Warden O'Loughlin will have charge.

**Tampa, Fla.**—The Tampa Towing and Litterage Company, Box 113, will purchase a steam fire pump, two turret nozzles and six connections for standard fire hose.

**Moline, Ill.**—Architect H. W. Whitsitt has been commissioned to draw plans for a \$7,000 engine house.

**Rock Island, Ill.**—The Fire and Lighting Committee is considering the purchase of 1000 ft. of fire hose.

**Evansville, Ind.**—The Board of Public Safety will recommend the purchase of a site at Washington and Grand avenues for a hose house.

**Straughn, Ind.**—Town will purchase fire apparatus.

**Berrall Heights, La.**—Citizens are urging the purchase of a chemical engine.

**Covington, La.**—Jefferson Fire Company No. 1 will purchase a 150-gallon tank and a larger pump with a 2-inch pipe to add to their equipment.

**Boston, Mass.**—Council has passed the proposed \$589,500 loan bill; of this amount, \$55,000 is for new fire boat; \$15,000 for providing quarters for men of fire boat and \$15,000 for a fire house in Oak square.

**Danvers, Mass.**—Citizens are urging the erection of a \$25,000 fire station.

**Greenfield, Mass.**—Town will vote on purchase of an automobile hose wagon.

**Hyde Park, Mass.**—Town has voted to purchase a \$2,300 truck.

**Lowell, Mass.**—Finance Committee has recommended the purchase of a \$5,500 auto combination salvage wagon.

**Melrose, Mass.**—The Board of Aldermen has voted to build a \$10,000 fire station in the Highland; also considering an \$8,700 station in Wyoming.

**New Bedford, Mass.**—The Board of Fire Engineers has recommended the purchase of a \$500 automobile for Master Mechanic D. D. Briggs; also a new brake for Truck No. 1.

**West Springfield, Mass.**—Town has appropriated \$3,500 for an automobile for the Fire Chief.—F. H. Sibley, Town Clerk.

**Kalamazoo, Mich.**—Citizens have voted \$17,000 bonds for a new fire station in the Third Ward.

**Cloquet, Minn.**—Citizens are urging the erection of a fire hall.

**Kansas City, Mo.**—Citizens will vote on the issuing of \$150,000 bonds for building new engine houses.—T. T. Crittenden, Mayor; Gus Pearson, City Comptroller.

**University, Mo.**—Citizens have voted to issue \$10,000 bonds for the erection of a Fire Department building.—E. G. Lewis, Mayor.

**Florence, Neb.**—Town has petitioned for one-horse chemical apparatus.—G. R. Gamble, Chief.

**Omaha, Neb.**—Citizens will vote on \$145,000 fire engine house bonds.

**Goffstown, N. H.**—Town will purchase new fire apparatus.

**Glassboro, N. J.**—Citizens are urging the erection of a \$4,000 fire house.

**Irvington, N. J.**—Council has passed an ordinance authorizing the erection of a fire house on Colt street from plans of Architect J. B. Allen.—M. Stockman, Town Clerk.

**Merchantville, N. J.**—The local fire company will add additional chemical apparatus.

**Newark, N. J.**—The Exempt Firemen's Association, J. G. Wolf, Chairman Committee, will purchase new uniforms.

**Rutherford, N. J.**—Town is considering better quarters for the Fire Department and additional equipment.—Albert O. Jackson, Chief.

**Summit, N. J.**—City will purchase 20 uniforms for Hose Company No. 2.—William A. J. Reeve, Secretary.

**Verona, N. J.**—Two hose companies and a hook and ladder company have been formed; Council has appropriated \$1,500 for apparatus.

**Newburgh, N. Y.**—Council has purchased a site west of the Washington Steamer Company's house on Broadway and will erect an addition.

**Port Jervis, N. Y.**—Council is considering the erection of a drying tower for hose.

**Rochester, N. Y.**—The Board of Contract and Supply has advertised bids for twenty-four additional fire alarm boxes.

**Rushville, N. Y.**—Village will erect a fire house.—Dr. A. T. Halstead, President Board of Trustees.

**Utica, N. Y.**—Council has decided to raise \$10,000 to equip Engine House No. 8.

**Cuyahoga Falls, O.**—The Fire Department which disbanded will be reorganized at once.

**Norwalk, O.**—Fire Chief Brown has recommended the purchase of truss ladders and more hose.

**Zanesville, O.**—City has decided to build two more fire houses this summer.—W. H. Tanner, Chief.

**Ambridge, Pa.**—The Ambridge Fire Department has petitioned Council for the



erection of a fire house. Address James Doyle or A. J. Christie, Chairman Finance Committee.

**Archbold, Pa.**—Three fire companies have asked for 2,000 feet of hose, six hose suspenders, one dozen spanners, one relief valve and one nozzle.—Fire Chief Gerbig.

**Bellevue, Pa.**—Town will vote on \$25,000 bond issue May 22 for a new fire engine house and Borough Hall.

**Birdsboro, Pa.**—The Fire Committee will purchase 500 feet of hose.

**Butler, Pa.**—Fire Chief J. C. Burkhalter has recommended the establishment of another company, the erection of a permanent house for each fire company and the improvement of the fire alarm system.

**Jeanette, Pa.**—Town is considering purchase of 1,000 feet of hose.

**Johnstown, Pa.**—The Fire Department has asked for a \$75,000 appropriation.

**Scranton, Pa.**—Council has adopted ordinance authorizing purchase of a site at Winton and West Market streets for a new fire house; also considering ordinances for fire houses on Cedar and South Irving avenues.

**Scranton, Pa.**—Council has decided to place fire alarm indicators in six newspaper offices.

**Charleston, S. C.**—Competitive plans are being prepared for a fire station.—Louis Behrens, Chief.

**Dallas, Tex.**—City is considering erection of fire stations in Oak Lawn, Tenth Ward and Oak Cliff.—H. L. Seay, Commissioner of Fire and Police.

**Weatherford, Tex.**—City is considering \$10,000 bond issue for fire protection.

**Williamsburg, Va.**—City has decided to purchase a chemical wagon.—C. J. Person, Chief.

**Burlington, Vt.**—Mayor J. E. Burke has recommended the purchase of a hook and ladder truck; cost \$2,750.

**Tacoma, Wash.**—Council is considering erection of an engine house at Thirty-eighth and East H streets.

**Benwood, W. Va.**—City will install a fire alarm system.

### BIDS RECEIVED AND CONTRACTS AWARDED

**Violet, Ill.**—In response to the second advertisements for bids to furnish a combination chemical and hose wagon for the Fire Department, nine bids were submitted and were referred to the Committee on Fire by Council. The bids ranged in amount from \$1,350 to \$2,190. Three of the intermediate bids were between \$1,500 and \$1,600 and the others neared the \$2,000 mark. The first bids were rejected because they were too high.

**Baltimore, Md.**—The Board of Award has empowered the Fire Board to purchase 100 Gamewell fire alarm boxes. The boxes are fully covered by patent rights. The contract for the boxes was originally awarded to the Frederick Pearce Company, of New York, but it surrendered the contract.

**Rochester, N. Y.**—The Board of Contract and Supply has let a contract for 5,000 feet of fire hose to the Eureka Fire Hose Company, of Syracuse, for \$5,000.

**Lima, O.**—The Board of Public Safety received two bids on desirable aerial trucks for the Fire Department, one bid being from the Seagrave Company for \$5,661, with an additional \$450 for equipment, and the other being from the American-La France Company, of Elmira, N. Y., for \$5,589, with \$321.50 for additional equipment; the acceptance of the low bid was authorized.

**Galveston, Tex.**—Bids for furnishing the city with an automobile fire engine were opened from the Robinson Fire Apparatus Manufacturing Company and the Howe Engine Company; the bids were referred to the Commissioner of Fire and Police and Chief of the Fire Department for investigation and report.

Reporting on the bids received at a former meeting for the construction of an engine house on Avenue P½, between Twenty-eighth and Twenty-ninth streets, Commissioner Austin recommended the awarding of the contract to Robert C. Gracey, the lowest bidder, at \$2,683; in presenting the recommendation he also recommended that the fire house be built at some point on Avenue Q, between Twenty-fifth and Twenty-eighth streets, instead of on Avenue P½.

### ELECTRIC RAILWAYS

**Birmingham, Ala.**—The Birmingham & Gulf Railway and Navigation Company, with a capital of \$20,000,000, has been organized by James H. Morris, of Morris Bros., Philadelphia, to build an electric railway from Birmingham to the various large towns in the vicinity; company proposes to create an interurban system of electric railways similar to those in the Northern States, covering the Birmingham district, and including Bessemer, Ensley and other

thriving towns in the neighborhood, but the particular object of the enterprise is to furnish another transportation line to connect the coal and iron mines and the manufacturing establishments of the Birmingham district with water navigation at Tuscaloosa, which is sixty miles southwest of Birmingham upon the Warrior River.

**Bentonville, Ark.**—The Arkansas Co-operative Construction Company has been incorporated to build a standard gage electric interurban railway from Joplin, Mo., to northeast Arkansas; distance, 200 miles.—J. W. Blocher, Secretary; P. H. Sackett, Chief Engineer.

**Oakland, Cal.**—Surveys have been made by the Oakland & Antioch Electric Railway for a route across Contra Costa County.—J. Naphtaly, A. W. Maltby and Allan Pollok, Promoters.

**San Francisco, Cal.**—A method of furnishing additional street car transportation for the outlying districts within the city has been suggested; the plan proposed is to offer the Geary street franchise for competing bids, together with a system of crosstown lines, which could be operated in conjunction with that road; idea has been suggested to city by Robert Swayne, and the details are to be formulated by an executive committee, composed of one member from each improvement club.

**San Mateo, Cal.**—Messrs. Oear and Ames have petitioned City Trustees for a franchise to construct an electric belt railway.

**Tehama, Cal.**—City Trustees have been asked for a franchise for a railway, operated either by horse or electric power and using D, E and Second streets, from the river bank to the Southern depot. N. Rogers and H. Zurborst, Trustees, have the matter in charge.

**Dover, Del.**—Philadelphia and Salisbury promoters have been at work in the principal counties of the peninsula with engineers and inspectors to prepare a plan by which three immense electric power houses could be distributed throughout the peninsula and operated by water power adjacent to some of the heavy running streams of the Eastern Shore; Inspectors have already estimated that the Choptank has a generating power of 350 horsepower and the Tuckahoe of 250; the Chester is smaller, but in some inclined places will furnish 100 horsepower; promoters will soon secure a charter from this city under the name of the Peninsula Electric Company; line may connect Elkton, Perryville, Easton, St. Michael's, Trappe, Oxford, Galena, Chestertown, Rock Hall, Massey, Clayton, Dover, Townsend, Middletown, Salisbury, Cambridge, Crisfield, Snow Hill, North East, Denton, Ridgely, Greensboro, Goldsboro, Hillsboro, Centerville, Sudlersville, Barclay, Church Hill, Crumpton, Queenstown, Winchester and Love Point.

**Brunswick, Ga.**—The City & Suburban Railway Company has applied for a charter to construct and operate an electric railway; length, four miles; capital stock, \$50,000.—F. D. M. Strachan, Frank D. Aiken, E. F. Coney, C. Downing and Albert Fendig, Promoters.

**Fitzgerald, Ga.**—Preliminary surveys have been completed for the proposed electric railway between Fitzgerald and Ocilla; distance, 12 miles; company will award contracts for construction of the road by May 31.—A. Holtzendorf, Fitzgerald, Secretary and General Manager; the General Engineering and Contracting Company, New York, Engineers.

**Twin Falls, Idaho.**—I. B. Perrine will apply to Council for a franchise to construct and operate an electric street railway.

**Wallace, Ida.**—The Spokane, Wallace & Interstate Railway Company, which plans to build between Wallace, Wardner, Burke, Mullan, Coeur d'Alene, Idaho, and Spokane, Wash., about 100 miles of single track, has not yet let contracts.—F. F. Johnson, Wallace, President; H. F. Robertson, Wallace, Chief Engineer.

**Aurora, Ill.**—The Trustee of the bonds of the Rockford & Interurban Railway Company has sanctioned the recently passed franchise licensing the running of the interurban cars of the company into that city and the measure has been accepted by the Company.

**East St. Louis, Ill.**—The East St. Louis, Columbia and Waterloo Electric Railway Company has accepted franchise to use Nineteenth street from Bond avenue south to city limits.

**La Salle, Ill.**—The Galesburg, La Salle & Kankakee Railway Company has been incorporated to build an electric railway from La Salle to a junction with the Chicago, Indiana & Southern Railroad in La Salle County, to a point opposite La Salle, on the Illinois River; capital stock is \$300,000.—William J. Parks and John W. Scott, La Salle, Ill.; Frank O. Lash, of Bloomington, Ill.; James D. Flood and Harry F. Hamlin, Chicago, Board of Directors.

**Sterling, Ill.**—B. C. Payne, F. N. Rogers,

E. S. Bailey, F. J. Hohing and F. W. Merrick have incorporated an interurban railway company with a capitalization of \$100,000; an interurban electric line from Elgin to Sycamore, DeKalb and west to Dixon will be constructed.

**Evansville, Ind.**—The Southern Indiana Traction Company will extend its line from Patoka, Ind., to Hazelton, Ind., this year; the Evansville and Eastern line will also build from Rockport to Grandview, Ind.

**Indianapolis, Ind.**—Bids will be received about May 11 by the receiver for the Indianapolis, Newcastle and Toledo Electric Railway for the construction of the road between this city and Newcastle.

**Jeffersonville, Ind.**—Survey for a new traction line between this city and Cincinnati has been begun by O. W. Pegee.

**Kingman, Ind.**—J. J. Burns & Co., Chicago, Ill., are considering the promotion of the construction of an electric railway to connect Kingman with Crawfordsville and Covington.

**Fort Dodge, Ia.**—The proposed interurban to Mason City will be built via Coulter, Latimer and Thornton, instead of via Hampton.

**Sioux City, Ia.**—The Northwestern is preparing to build an interurban line from Centerville, S. D., to this city.—E. A. Burgess, President Commercial Club, is interested.

**Frankfort, Ky.**—Articles of incorporation of the Cincinnati, Louisville, Lexington and Maysville Traction Company, with \$10,000,000 capital stock, have been filed here with the State Railroad Commission and the Secretary of State by W. T. S. Blackburn, of Dry Ridge, Grant County, president of the company and one of the promoters. Articles provide for the construction of a complete electric traction system to be operated between Cincinnati and Lexington and Maysville and Louisville, crossing each other at Dry Ridge; system will be about 250 miles in length and will traverse the counties of Boone, Kenton, Campbell, Gallatin, Grant, Pendleton, Bracken, Mason, Harrison, Bourbon, Fayette, Nicholas, Clark, Franklin, Scott, Owen, Jefferson, Shelby and Henry; it will touch at Owenton and Newcastle and other cities of this size.

**Paducah, Ky.**—A local committee of business men has commenced soliciting subscriptions for the Kentucky & Ohio River Railroad, which proposes to build an interurban line from here to Cairo; company has asked that the people in the towns and cities on the line subscribe for \$100,000 worth of the bonds to insure its construction.

**Hagerstown, Md.**—Negotiations are in progress between the Washington and Berkeley Bridge Company, which is erecting a bridge over the Potomac at Williamsport, and Eastern capitalists for the use of the new bridge to carry the tracks of an electric railway which will be built from Williamsport to Martinsburg via Vancleaveville.

**Hagerstown, Md.**—Pennsylvania capitalists have purchased water rights and will erect power plant to operate a trolley line over the Antietam battlefield; road will be built from Boonsboro, via this city and Sharpsburg to the battlefield.

**Sandy Spring, Md.**—An electric line will be constructed at once to connect this city and Kensington; \$50,000 is available.—Charles F. Brooke, Sandy Spring, President.

**Pittsfield, Mass.**—The Berkshire Trolley Company will expend \$70,000 in improvements.

**Kansas City, Mo.**—The Blue Valley Traction Company has been incorporated to construct an electric railway from Raytown, Jackson County, to Kansas City; distance, 10 miles.—U. S. Epperson, J. M. Lowe, E. M. Sweetman, C. C. Carver, Sam. T. McDermott, James W. Jones, J. M. Devine, H. H. Dixon and C. W. Gorman, all of Kansas City, Mo., Promoters.

**Macon, Mo.**—Incorporation papers will shortly be applied for by an organization of farmers and experienced railroad men to construct a network of trolley lines through Northeastern Missouri and down to St. Louis; originator of the enterprise is Henry Funk, of Shelby County; main terminals of the road will be Kirksville, Hannibal and St. Louis; St. Louis line will start from Bethel or Shelbyville and go into the city by way of Shelbyville, Paris and Mexico; east and west line will run about midway between the main line of the Burlington and the Quincy, Omaha and Kansas City roads.

**Moberly, Mo.**—Citizens of Huntsville and this city have accepted a proposition made by Messrs. Manning and Wellman, Ottumwa, Ia., to construct an electric street railway in this city and an interurban railway between Moberly and Huntsville.

**St. Louis, Mo.**—Work will begin immediately on the new electric line between East St. Louis and Waterloo.

**Helena, Mont.**—The Montana Rapid Transit Company has been incorporated to build an electric railway from Helena to East Helena, Jefferson, Boulder, Basin Calvin

to Butte; length, 72 miles; preliminary surveys have been made; capital stock, \$5,000,000.—E. C. Day, Secretary.

**Millville, N. J.**—The Bridgeton & Millville Traction Company will extend its line to Port Norris; distance, 20 miles.—C. F. W. Meyers, Chief Engineer, Bridgeton, N. J.

**Trenton, N. J.**—The franchises, rights and property of the Trenton, Lakewood & Atlantic Railway Company changed hands when Lakewood and Point Pleasant capitalists became the principal owners; new owners will at once push the road to completion and expect within a reasonable time to operate trolley cars between Trenton and Lakewood; the new owners include Charles R. Le Compte, Harry J. Terwilliger, Ernest E. Le Compte and Nicholas MacDonald, all of Lakewood; James H. Butcher and J. Arthur Butcher, both of Ardena, and Captain Roderick A. Clark, of Point Pleasant.

**Flushing, N. Y.**—The New York & North Shore Traction Company, which recently secured a franchise for the extension of its lines from Roslyn to the north shore, has also been granted a franchise by the Board of Estimate and Apportionment for the extension of its system to the eastern boundary of Flushing; route through Queens, for which the necessary consents have been secured, will be through Tenth street to Ashburton avenue, to Broadway and west to Prince street, where connections will be made in the near future with the lines which will traverse Whitestone, Malba and the north shore sections fronting on the East River, and also establish a connecting service between these points and Manhattan, over the road through Jackson avenue, at Broadway and Prince street, Flushing.—James A. MacIlhenny, Counsel.

**Geneva, N. Y.**—The Geneva, Waterloo, Seneca Falls and Cayuga Lake Traction Company has petitioned for a franchise to operate a single-track line on Exchange street.

**Riverhead, L. I., N. Y.**—Town Board has received an application from John E. Root, New York; George W. Reeves and Frederic M. Lewis and J. Madison Wells, of Greenport, and George F. Stackpole, Riverhead, for a franchise to build and operate an electric railway from the Riverhead depot to Orient Point.

**Watertown, N. Y.**—Attorney F. L. Carlisle is endeavoring to have the Legislature extend the franchise of the Watertown & Carthage Traction Company.

**Waverly, N. Y.**—G. L. Leavenworth, of Troy; J. H. Madigan, Mechanicsville, and T. C. Welling, New York City, Engineers, have been selected to take charge of the construction of the Elmira, Corning & Waverly Railroad; line will later connect Corning and Elmira.—J. E. Packer, 50 Church street, New York, Secretary.

**Charlotte, N. C.**—County has granted David Barry, Amherst, Mass., and James W. Barry a franchise to build an electric railway in Concord and Cabarus County.

**Elizabeth City, N. C.**—D. G. Wilson, Weeksville, is promoting a proposition to build an electric railway from Elizabeth City to Albemarle Sound; length, 14 miles.

**Grand Forks, N. D.**—The Grand Forks Street Railway Company has asked for right to use highway to cemetery and fair grounds.

**Bellefontaine, O.**—Gen. Asa Jones, of Youngstown, and General Robert Kennedy, of Bellefontaine, are interested in the promotion of a traction line to connect Bellefontaine and Sidney; Judge Hugh T. Mathers, Sidney, is President of the company that hopes to complete this line and ultimately connect the capitals of Ohio and Indiana by an extension westward from Sidney to Union City, where a line which already runs to Indianapolis ends.

**Cleveland, O.**—The Cleveland Subway Company has been incorporated to construct electric railways under all the principal streets of Cleveland, including Euclid and Superior streets, Clear and Cedar avenues, Broadway and Detroit avenue.—F. A. Mehling, W. A. Greenland, A. L. Lang, William C. Fischer and Thomas P. Schmidt, Incorporators.

**Cleveland, O.**—Council has passed thirteen street railway establishment ordinances.

**Springfield, O.**—As a result of the filing of a mortgage for \$5,000,000 in favor of the Carnegie Trust Company of New York City by the Springfield, Wilmington & Cincinnati Traction Company, B. M. Barr, President, work on this air line will be started within 30 days; line will pass through Clifton, Cedarville, Jamestown, Bowersville, Wilmington, Clarksville, Norwood and into Cincinnati.

**Tulsa, Okla.**—The Oklahoma Union Traction Company has been chartered to construct an electric interurban railway from Tulsa to Sapulpa; distance, 20 miles.—Albert A. Small, C. L. Holland, E. T. Tucker, G. C. Stebbins and S. A. Orcutt, city, Incorporators.

**Klamath Falls, Ore.**—The old horse car

service on the streets will be supplanted with an electric motor car.

**Portland, Ore.**—County Commissioners have received an application from the Western Oregon Trust Company for a franchise for an electric railway on the Barnes road.

**Altoona, Pa.**—Funds have been secured for the construction of the proposed Altoona-Bedford trolley line.—F. W. Patterson, Chief Engineer.

**Chambersburg, Pa.**—The C. G. W. Trolley Company has been granted a franchise in the northern part of the town.—H. B. McNulty, Secretary.

**Collingdale, Pa.**—Borough Council has given right of way to the Philadelphia & Delaware County Railway Company for extension of the line through the borough from Chester pike to the Sixty-ninth street station of the Philadelphia Rapid Transit Company; all rights now have been secured for the railway with the exception of through Aldan and Sharon Hill.

**Kennett Square, Pa.**—The Kennett-Coatesville Traction Company, which proposes building a trolley road from Kennett through Londongrove and Doe Run to Coatesville, has just reorganized, and William H. Thompson, of Doe Run, has been elected President and Edward Walton, of Londongrove, Secretary and Treasurer.

**Lewisburg, Pa.**—Chas. S. Ball, Chas. A. Desbrow, John F. Whitaker, D. L. Diehl, Erwin M. Beale and Andrew A. Leiser will apply for a charter for a corporation to be called the Lewisburg Street Railway Company.

**Morris, Pa.**—The Morrisdale Railway Company has been chartered to build an electric railway in Clearfield County, in the vicinity of Morris; length, four miles; capital stock, \$40,000.—Charles Steele, Northumberland, President.

**Philadelphia, Pa.**—The Philadelphia Suburban Traction Company will apply for a charter to build an electric street railway from Southampton to Hatboro.—W. E. Watt, J. L. Grogan, H. C. Case, J. A. Bonnell and W. A. Merrick, Newtown, Promoters.

**Philadelphia, Pa.**—Council is considering an ordinance authorizing the Bustletown & Byberry Suspension Railway Company to build a suspension railway system from Frankford Road and Bridge streets, Bustletown, to Byberry.

**Philadelphia, Pa.**—The Northwest Business Men's Association will ask the Rapid Transit Company for a new line on Twenty-fourth and Twenty-fifth streets.—Henry Linde and J. G. Schempp, Committee.

**Bryan, Tex.**—Mayor J. T. Maloney has offered to build a 5-mile electric railway from Bryan to College Station if the citizens will raise a bonus of \$10,000.—G. S. Parker, Chairman Citizens' Committee.

**Rockdale, Tex.**—An interurban railway will be constructed to connect Rockdale with Granger, Bartlett and Florence.—H. C. Meyer, C. L. Tanner, R. H. Hicks, all of Rockdale, are interested.

**Sherman, Tex.**—J. P. Hornaday & Co., 30 Church street, New York, will let construction contracts about May 1 for building the line of the Gainesville, Whitesboro & Sherman Electric Railway.

**Everett, Wash.**—The Everett & Tacoma Railway Company has made surveys and secured practically all right-of-way for its proposed electric railway from Everett to Snohomish, Issaquah, Seattle and Tacoma; distance, 110 miles.—G. M. Cochran, President.

**Wheeling, W. Va.**—The City & Elm Grove Railroad Company will rebuild its line from Elm Grove to West Alexander and make other improvements.—J. W. Smith, city, General Manager and Chief Engineer.

**Grand Rapids, Wis.**—The Grand Rapids Street Railway Company has been incorporated to build a line to Nekoosa, at a cost of \$50,000; length, 10 miles.

**Cobourg, Ont., Can.**—The Cobourg, Port Hope & Havelock Electric Railway Company has been granted a charter by the Legislature for a line which will run from Port Hope to Cobourg, via Warkworth, Campbellford and Havelock, with branches to Blairton and to the Marmora mining district.—Col. H. A. Ward, K. C., Port Hope, Secretary, and W. J. Crossen, Cobourg; H. T. Bush, Port Hope; E. S. Huycke, K. C., Port Hope, and Reeve Jos. Knox, of Havelock, Promoters.

## BIDS RECEIVED AND CONTRACTS AWARDED

**Gold Hill, Col.**—The Consolidated Tramway Company, Inc., 45 Broadway, New York, and Roanoke, Va., has been awarded contract for the construction of a looped-section tramway for the Gold Issue Mining and Milling Company, near Gold Hill, Teller County, Col.; this line will be about 2½ miles in length and will convey gold ore from the mines of the company direct to

bins at the cyanide mills; active construction work will begin on this line on April 15, and it is expected that it will be completed and put in operation within six weeks.—W. C. Lawson, President.

**Parsons, Kan.**—The Kansas Union Traction Company has closed a contract with Archer & Rollins, Kansas City, Mo., for the preliminary survey and report on the proposed railway between Parsons and Coffeyville, via Altamont and Edna.

**Hattiesburg, Miss.**—The Hattiesburg Traction Company, April 10, awarded to the Electrical Installation Company, of Chicago, the contract for the erection of a new power plant and the completion and equipment of eight miles of street railway; seven miles of street car track was laid several years ago and bonds for the additional equipment were issued, but the panic prevented their sale. The company owns the present light and power plant and the contract to-day will represent an additional expenditure of about \$150,000. General Manager C. Z. Stevens says that cars would be running through the streets of Hattiesburg by August 1. Work on the new power plant, which is to occupy an entire block at the intersection of Second avenue and the New Orleans & North-eastern Railroad, will begin within the next week.

**Sapulpa, Okla.**—The Sapulpa & Interurban Railway Company, which proposes to build a line from Sapulpa, Okla., southeast via Kiefer to Glenpool, on the Midland Valley Railroad, ten miles, has awarded contract for grading to Pat McNeerney, Sapulpa, and contract for bridges to the Kansas City Bridge Company, Kansas City. Five miles additional will be built at and near Sapulpa, also a three-mile line north to oil fields at Tanneha. Surveys are made and right-of-way obtained. The company will erect the overhead work with its own forces.—H. E. Clark, President, Glen Campbell, Pa.; D. W. Patton, Chief Engineer, Sapulpa.

**Lake Superior Junction, Ont., Can.**—The Consolidated Tramway Company, 45 Broadway, New York, has just closed a contract with the Northern Pyrites Company, 82 Beaver street, New York, for the construction of a two-mile line of Lawson's looped-section tramway near Lake Superior Junction, Ont. The line will have a capacity of 30 tons per hour and will deliver pyrites ore from the company's mines to a siding on the Grand Trunk Railway near Lake Superior Junction.

## BRIDGES

**Conway, Ark.**—County Judge James A. Lea has ordered that four new steel bridges be built in this county, and has appointed Commissioners for each bridge to serve with him.

**Oroville, Cal.**—Supervisors of Butte and Glenn counties are considering the construction of a bridge across the Sacramento River.—J. B. Leonard, Engineer.

**Red Bluff, Cal.**—The Board of Supervisors has received a petition for a bridge over Elder Creek, on the Conung Creek.

**Woodland, Cal.**—County Supervisor is considering the erection of a bridge over Cache Creek.—Frank Hambleton and Chas. Simpson, Gumda, Committee.

**Jacksonville, Fla.**—The Riverside Improvement Company is urging the construction of a bridge over Willow branch on Riverside avenue; cost, \$500.

**Tampa, Fla.**—Citizens will vote May 18 on \$170,000 bonds for a steel lift bridge across Lafayette street.

**Augusta, Ga.**—City will expend \$50,000 on bridges.

**McConnell, Ill.**—Bids will soon be received for the construction of two bridges in Wadams township.—A. N. Johnson, Springfield, State Engineer; John Fisher, Town Clerk.

**Quincy, Ill.**—State Engineer A. N. Johnson, Springfield, is preparing plans for repairs to the bridge in Melrose township.—Joseph Schonarth, Township Clerk.

**Streator, Ill.**—State Engineer A. N. Johnson, Springfield, is preparing plans for construction of three bridges in Otter Creek township.—J. G. Greener, Township Clerk.

**Shelbyville, Ind.**—County Commissioners have not as yet selected Engineer for construction of two steel or reinforced concrete bridges, one over Blue River and the other over Sugar Creek.

**Council Bluffs, Ia.**—The West Council Bluffs Improvement Club is urging the construction of a fine bridge over the Missouri River between Omaha and this city; cost \$50,000.—A. C. Keller, C. E. Spark, H. J. Swartz, W. C. Boyer and C. C. Clinton, Committee.

**Davenport, Ia.**—Council has received plans for the viaduct the Milwaukee road proposes to build over Fulton avenue in East Davenport.

**Topeka, Kan.**—Council is considering the construction of a bridge across the Shunganunga between Twenty-first and Twenty-



second streets on Fillmore.—City Engineer Rogers.

**Paducah, Ky.**—McCracken County will construct 420-foot bridge across Clark's River; also one 90-foot concrete bridge across Perkins Creek.

**Boston, Mass.**—Council has passed the proposed \$989,500 loan bill; of this amount, \$10,000 is for a foot bridge on Dalton street and \$10,000 for a foot bridge on Hyde Park avenue.

**Linn Creek, Mo.**—Linn Creek Bridge Company has been incorporated with \$12,000 to construct bridge.—T. S. Hart, Engineer in Charge; A. J. Watson, President.

**University, Mo.**—Citizens have voted to issue \$25,000 bonds for the construction of a bridge over the River des Peres.—E. G. Lewis, Mayor.

**Long Branch, N. J.**—The Board of Freeholders has adopted a resolution for a new draw in the Atlantic avenue bridge.

**Newark, N. J.**—House has passed a bill which permits the construction of the Elwood avenue bridge over the Passaic River from Newark to Arlington.

**Perth Amboy, N. J.**—Middlesex County Board of Freeholders is considering improvements to the bridge over Woodbridge Creek.

**Toms River, N. J.**—Ocean County Board of Freeholders is considering the erection of a bridge from the mainland to Ocean Beach; committee, consisting of W. S. Crammer, E. F. Crammer and W. S. Jackson, has been appointed to have Manna-hawken Bay surveyed and estimates made upon proposed bridge.

**Syracuse, N. Y.**—City will make provision for a \$51,000 bascule bridge before it finishes proposed improvements on North Franklin street.

**West Seneca, N. Y.**—Taxpayers have defeated proposition to construct bridges over Smoke's Creek at Kirby avenue and also the one leading to Lewis Park.

**Asheville, N. C.**—The Special Bridge Committee will recommend to Buncombe County Commissioners construction of reinforced concrete bridge across French Broad River; cost, \$100,000; second choice for location is from Park avenue to Takeoostee place, in West Asheville, cost of steel construction being \$50,000; recommendations are in accordance with report submitted by Charles E. Waddell, Asheville, Engineer; M. L. Reed, Chairman Special Sub-Committee.

**Charlotte, N. C.**—Mecklenburg County Commissioners have decided to construct 660-foot bridge across Catawba River at Rozzell's Ferry; old abutments and foundation work will be used; cost, \$14,000 to \$18,000.—W. M. Long, Chairman.

**Canton, O.**—The Board of Public Service will construct a concrete bridge over the west branch of the Nimishillen Creek; estimated cost, \$1,500.—J. A. Starrett, City Civil Engineer.

**Cincinnati, O.**—The Board of Public Service has received estimates and specifications for superstructure and repair of roadways for the Eighth street bridge; cost, \$49,185.

**Hamilton, O.**—County Commissioners have rejected all bids for the construction of a bridge over Indian Creek, Rely Township.

**Massillon, O.**—The Board of County Commissioners have appointed the Concrete Engineering Company, of New York, to furnish plans for the proposed new reinforced concrete bridge over the Tuscarawas River on Tremont street in this city; plans will be bought for \$300 and if accepted and used the county will give the company \$1,200 additional.

**Xenia, O.**—The County Commissioners have passed a resolution to erect a new bridge over Gladly run, in the corner of Xenia Township, on the road leading from the Cincinnati pike to the Bellbrook pike; structure will be of steel, with a concrete floor; estimated cost is \$800.

**Ardmore, Okla.**—Carter County citizens will vote on \$200,000 bridge bonds.

**Jenks, Okla.**—A 1,500-foot, \$45,000 bridge will be built across the Rock River near this town.

**Okemah, Okla.**—Okfuskee County citizens will vote June 11 on \$100,000 bonds for construction of six steel bridges across North Canadian River and four across Deep Fork River.

**Reading, Pa.**—Council is considering construction of foot bridge over Lebanon Valley railroad tracks on Tulpehocken street.

**Scranton, Pa.**—Council has adopted an ordinance for a concrete bridge over the Roaring Brook on Hickory street.

**Knoxville, Tenn.**—West Knoxville citizens are in favor of the erection of a "Y" viaduct on Asylum avenue with approaches to both Asylum and Forest avenue.—O. L. White, Chairman.

**Memphis, Tenn.**—The Southern Railroad will be compelled to erect a bridge over its yards at Madison avenue to replace the present structure.—City Engineer Weatherford.

**Nashville, Tenn.**—Davidson County Court

has adopted \$250,000 bond issue for completion of two Cumberland River bridges.

**Sneedville, Tenn.**—Citizens will vote on bridge bonds for Hancock County.

**Salt Lake City, Utah.**—City will expend \$65,000 on the North Temple street aqueduct and \$5,000 on bridge across Jordan River at North Temple street.—L. C. Kelsey, City Engineer.

**Dayton, Wash.**—The Oregon Railroad & Navigation Company will build a steel bridge over the Touchet River.

**Tacoma, Wash.**—Citizens have voted \$300,000 bonds for constructing bridges over gulches.

**Wheeling, W. Va.**—City Engineer Cooke has been instructed by the Alleys and Park Committee to correspond with engineering firms for the purpose of getting specifications and estimates on a concrete reinforced bridge to be constructed at Market street.

**Dryden, Ont., Can.**—City will expend \$8,000 for the erection of a bridge over the Wabigoon River.

## BIDS RECEIVED AND CONTRACTS AWARDED

**Huntsville, Ala.**—Converse Bridge Company, Chattanooga, Tenn., has contract to construct four steel bridges in Madison County, spanning streams that are crossed by recently improved roads; cost, \$6,000.

**Dover, Del.**—The contract for a steel drawbridge over Leipsic River was awarded to the Canton, O., Bridge Company, on a bid of \$7,164, by Kent County Levy Court.

**Starke, Fla.**—Bradford County has awarded contract to Roanoke Bridge Company, Roanoke, Va., at \$11,950 for construction of steel bridge over New River, four miles from Lake Butler; length, 1,226 feet.—C. L. Peck, Chairman Board of County Commissioners.

**Ellijay, Ga.**—The Roanoke Bridge Company, Roanoke, Va., has contract to construct steel bridge over Ellijay River; double-track roadway and two six-foot sidewalks; one span of 102 feet.—F. J. Fagan, Candler Bldg., Atlanta, is company's agent.

**Bellefonte, Ill.**—The Bridge Committee of the County Board of Supervisors and the Highway Commissioners of Freeburg Township have let contract for the construction of a new iron bridge with a 40-foot span over Sugar Creek at the point northeast of Freeburg, where that stream crosses the Jefferson road. The lowest bid was submitted by the Missouri Bridge and Iron Company, of St. Louis, who offered to do the work for \$1,100; the bridge is to be completed by June 1.

**Chicago, Ill.**—Bids were received by I. J. Bryan, Clerk of the Sanitary District, American Trust Bldg., March 24, for excavating a channel, designated as Section Nine of the North Shore Channel, and for performing certain collateral bridge work. The work for which bids are invited includes the excavation of a channel about 5,000 feet long and containing about 375,000 cubic yards of earth, the construction of substructure and the erection only of the superstructure of a highway bridge at Devon avenue, all situated in the Township of Niles, and the city of Chicago, Cook County. All work to be completed before September 1, 1910. James O. Heymouth, Railway Exchange Bldg., Chicago, has been awarded contract at \$54,065.

The contract for furnishing material and constructing new supports and shifting present span at Lawrence avenue, bids opened on April 3, has been awarded to the Roehmheld Construction Company, New York Life Bldg., Chicago, at \$7,980.

**Booneville, Ind.**—The Commissioners of Warrick County have let contracts for the construction of 21 bridges as follows: To Thomas Beloit, six; Vincennes Bridge Company, five; Lafayette Bridge Company, ten.

**Harrisonburg, La.**—Contract for a steel bridge for Bushley Bayou near Harrisonburg, has been awarded to the Midland Bridge Company, of Kansas City, Mo., for \$18,300; contract for repair of the steel bridge at Jonesville has been awarded to Austen Bros., of Dallas, Tex., for \$4,375.—W. H. Bethard, Clerk Police Jury.

**Ann Arbor, Mich.**—The Toledo-Massillon Bridge Company, Toledo, has secured contract for constructing five bridges on the Ann Arbor Railroad line for about \$40,000. Joseph Wanbecq, Toledo, Resident Engineer.

**Batesville, Miss.**—The Board of County Commissioners has let contract to build a steel bridge over Long Creek, which, with the two let at the February term, will cost the county about \$5,000; the other two are to be over Orr Creek and Coldwater River.

**Carlsbad, N. M.**—The Commissioners of Eddy County opened bids for three new bridges and the Midland Bridge Company, the lowest of six bidders, was awarded the contract for a bridge across the Pecos River near Artesia at \$12,000, another at

Carlsbad at \$10,000, and the third across Black River near Malaga at \$2,700.

**Graham, N. C.**—There are to be built by the County several bridges of reinforced concrete, and the contract went to the Eureka Building Block Company.

**Murphy, N. C.**—Cherokee County Commissioners have awarded contract to Owego Bridge Company, Owego, N. Y., for construction of steel bridge over Hiwassee River; contract awarded through company's representative, C. W. Hodges, Greensboro, N. C., at \$8,698 for bridges and approaches.

**Cleveland, O.**—Bids for the substructure of the Denison-Harvard bridge were received April 3 by the County Commissioners and the Concrete Steel Construction Company, of Pittsburgh, Pa., was awarded contract at \$165,000.

**Dayton, O.**—The County Commissioners have let three contracts for the erection and repair of bridges; the Whip bridge, on the Lebanon pike, in Washington township, will be constructed of concrete by J. H. Morrison at \$5.50 a cubic yard; the superstructure of the Trotwood bridge will be built by the Brookville Bridge Company, at \$3,397, while the substructure will be placed by Oscar Puterbaugh, at his bid of \$524; J. H. Morrison was awarded the contract for the construction of the Calico bridge at \$2,050.

**Xenia, O.**—A new bridge will be built in Greene County near the Pennsylvania railroad in the extreme southwestern corner of Xenia Township at a cost of \$845; the contract was let by the County Commissioners to the Oregon Bridge Company, of Lebanon; the contract is for a low-truss steel bridge with concrete floor. A retaining wall on the west side of the Conner bridge in Xenia Township on the Springfield and Xenia pike, was also contracted for.

**Harrisburg, Pa.**—County Commissioners have opened bids as follows for constructing a concrete arch over Paxton Creek at State street: Nelson-Merydith Company, of Atlantic City, N. J., \$5,994; Stucker Bros., 15 N. Second street, 3 bids, \$7,490 to \$8,700, and Ferro Concrete Company, Cincinnati, O., \$4,595.

**Scranton, Pa.**—Contracts for eighteen new County bridges have been awarded by the Board of County Commissioners and approved by the County Comptroller, E. A. Jones. One of the contracts, that for a bridge crossing Spring Brook in Moosic, was not awarded because the bids were in excess of the appropriation of the Grand Jury. All of the bridges are to be of concrete foundation with steel girders. The awards for the several bridges were as follows: Over Roaring Brook Creek, Dunmore, to Edward Weiss, for \$1,500. Over Lehigh River, in Clifton, to Edward Weiss, for \$460. Over Wilson Creek, in Fell Township, to J. W. O'Brien, for \$480. Over outlet of Glenburn Pond, Glenburn, to W. E. Larue, for \$650. Over Hart Creek, Lackawanna Township, to Edward Weiss, for \$450. Over Hornbaker's Creek, Madison, to Edward Weiss, for \$280. Over outlet to Fuller's Swamp, South Abington, to W. E. Larue, for \$295. Over Ball's Creek, Scott, to J. W. O'Brien, for \$400. Over Spring Brook Creek, to Edward Weiss, for \$440. Over Stone's Creek, Waverly, to W. E. Larue, for \$250. Over Laurel Run, Archbald, to Munley & Cummings, for \$348. Over Wallen Pond Creek, Benton, to W. E. Larue, for \$375. Over Roaring Brook, Covington, to Edward Weiss, for \$290.

**Kaufman, Tex.**—The Commissioners' Court has awarded the contracts for the erection of 21 steel bridges in this County; these bridges will be apportioned in the four districts of the County according to the needs of the several districts.

**Colfax, Wash.**—Contract for constructing a steel bridge over Fine Creek has been awarded to John F. Archer & Co., of Spokane, for \$3,397.—Wm. M. Duncan, County Auditor.

**Beloit, Wis.**—The following bids were presented by the Board of Public Works to the Council for the repairing of the central bridge: Hayden & Wescott Lumber Company, Chicago, Ill., common bridge plank, \$27 per 1,000 feet, f.o.b. Beloit; select bridge plank, \$30 per 1,000 feet, f.o.b. Beloit. Keler Lumber Co., Beloit, 3-inch No. 1 common white oak bridge plank, \$29 per 1,000 feet, f.o.b.; full 3-inch thickness, \$2 per 1,000 extra. Meagher & Cook, Beloit, 3-inch sound white oak bridge plank, 6 inches and wider, cut to blocks, f.o.b. Beloit, \$38.50 per 1,000 feet; same without cutting, \$30.50 per 1,000 feet; will do the labor for \$989.75. C. C. Shafer, South Bend, Ind., furnish the lumber for blocks, \$27 per 1,000, f.o.b. Beloit. The Board recommended that the bid of C. C. Schaefer be accepted and that the bid of Meagher & Cook be not accepted, as the work, in its estimation, can be done for considerably less.

**Chippewa Falls, Wis.**—The contract for a steel bridge 16x118 feet, near Chippewa Falls, has been let to Weatherall & Co., of Chicago, Ill.

## STREET CLEANING AND REFUSE DISPOSAL

**Chico, Cal.**—Residents of Nord, Sacramento and Kennedy avenues have petitioned for the sprinkling or oiling for three miles on each avenue.—W. J. O'Connor and Wm. Graybill, Committee.

**Placerville, Cal.**—Governor Gillett is considering bill appropriating \$20,000 to keep down dust and otherwise make the State road to Lake Tahoe a pleasant drive during the summer.

**San Jose, Cal.**—Council has received a petition from W. E. Staller asking permission to build and operate in or near the city a sanitary garbage destructor.

**Hagerstown, Md.**—Mayor W. L. Hammond has recommended the purchase of a street sprinkler and the sweeping of streets at night.

**Duluth, Minn.**—The Board of Public Works will purchase two sprinkling wagons.

**Kansas City, Mo.**—Citizens will soon vote on the issue of \$75,000 bonds for improvements to the river front and \$200,000 bonds for the construction of an incinerating plant.—T. T. Crittenden, Mayor; Gus Pearson, City Comptroller.

**Perth Amboy, N. J.**—The Board of Aldermen has passed an ordinance authorizing Street Commissioners to purchase two street sprinklers at a cost of \$350 each.

**Troy, N. Y.**—The Commissioner of Public Works will expend \$250 for additional cans and carriers for the Street Cleaning Department.

**Akron, O.**—O. S. Warner is urging the erection of a crematory to take care of the city's waste.

**Columbus, O.**—Bids will soon be asked by the Board of Public Service for the construction of garbage disposal plant.

**Dayton, O.**—Council is considering petitions for sprinkling Bank, Edgewood and Eagle streets.

**Miamisburg, O.**—Council has decided to advertise for bids for sprinkling streets.

**Lebanon, Pa.**—Citizens are considering the oiling of streets as a means of settling dust.—L. E. Weimer, J. E. Hartman and Highway Commissioner William B. Weirich are interested.

**Media, Pa.**—The Highway Committee has recommended the purchase of a sprinkler and sweeper.—Daniel McClintock, Chairman.

**Baumont, Tex.**—Ordinance granting the Sanitary Trash Receptacle Company franchise for placing trash cans on streets has been referred to the Ordinance Committee.

**Beloit, Wis.**—Alderman Janvrin has introduced a resolution that the Board of Public Works be authorized to advertise for bids for cleaning the streets after May 1, the recipient to be granted the privilege of using the city sweeper, dump wagon, and to have the use of the hydrants.

## BIDS RECEIVED AND CONTRACTS AWARDED

**Marblehead, Mass.**—The Board of Health opened bids for the collection of garbage; the figures submitted were: John Cudihy, \$35 per week, and Elbridge E. Goodwin, \$40; the contract was awarded to Cudihy; there was a bid received from a party in Swampscott, which was not considered.

**Kearny, N. J.**—Council has awarded to Neils Jacobson, of Schuyler and Oakwood avenues, Arlington, the right to take all the ashes collected in the northern section of the town for a period of one year. Jacobson will pay \$175 for the ashes, which he will use to fill in his meadow property.

**Sea Bright, N. J.**—Representative Vaughn of the Heady Good Roads Company, was present at meeting of Borough Council in the interest of that company's dust protector, which sells for 12 cents per gallon, and one sprinkling of which, it is said, will last a week; it was decided to try a sample as an experiment.

**Little Falls, N. Y.**—The Sprinkling bids received by Board of Public Works were: A. J. Eysaman, \$800; Owen Rogers, \$700, and James Walsh, \$693. Mr. Rogers would use his own cart, make his own repairs, etc. On making estimates, Commissioner Collins decided that the Rogers bid was the best one for the city and he convinced the Board and the Mayor that on its merits the Rogers bid was the cheapest.

**Phelps, N. Y.**—Frank Hicks has been awarded the contract of sprinkling the streets at the rate of \$21 per week, which is to include a Sunday service.

**Rensselaer, N. Y.**—The bidders for the work of sweeping the streets and cleaning the catchbasins were numerous. Henry C. Parsons was the lowest bidder for the street sweeping, his figures being \$1,574; Charles Collins & Co. offered to clean the catchbasins for \$2.49 each; this was the lowest bid. The bidders and their figures are: Rabe & Burdick, sweeping, \$1,722.50; John

L. Post, 1,825; Benjamin Gates, \$1,600.99; Abram G. Tidd, \$1,850; catchbasins, \$5; John L. Tidd, \$1,750; basins, \$4; Edward J. Greppin, \$1,762.50; basins, \$3; George L. Wiltzie & Sons, \$1,849; basins, \$3.50; Henry C. Parsons, \$1,574; Parsons & Wanmer, \$1,697.75; Charles F. Collins & Co., basins, \$2.49; A. Hoogkamp, basins, \$2.74.

**West Point, N. Y.**—Bids received by Maj. Jno. M. Carson, Jr., Quartermaster U. S. A., West Point, N. Y., for garbage crematory, to be placed in the basement of cadet barracks mess hall, West Point: Lewis & Kitchen, Chicago, \$1,670; Morse, Boneyer Company, New York, \$1,750; Universal Destructor Company, New York, \$1,975; Dixon Engineering Company Toledo, \$2,020; Decarie Manufacturing Company, Minneapolis, \$5,600. The conditions require the disposal of 1,000 pounds per hour without nuisance.

**Columbus, O.**—Bids were opened March 31 by the Board of Public Service for furnishing, delivering and installing machinery and equipment for the garbage reduction plant adjacent to Scioto River, Franklin Township, contract No. 4, as follows: L. J. Finley & Co., \$22,285; W. H. Conklin & Co., \$21,143; W. H. Seddon Plumbing and Heating Company, \$23,323; Huffman, Conklin & Co., \$22,577; Fitzpatrick & Hoepfner, \$21,796; Rootsville Foundry and Machine Company, \$27,379; Simmons Engineering Company, Indianapolis, Ind., \$19,945.—E. W. Hirsch, Secretary of Board.

**Norfolk, Va.**—The new bid for the removal of the night soil from the city proper covering about thirteen hundred houses not as yet connected with the sewerage system were opened by the City Health Board April 12 and after reviewing the bids which in conformity with the specifications recommended to the Council that the bid of Huybert & Duncan be accepted, their bid being the lowest. Only two bids were submitted, as follows: Huybert & Duncan, \$2.25 per house for removal from city and \$2 for placing in crematory. S. S. Armstrong, Jr., \$2.29 per house to crematory and \$2.39 removal from the city, a distance of two miles.

**Beloit, Wis.**—The bid of E. J. Atkinson for sprinkling the streets was presented to the Council; the bid of \$80 per month for sprinkling Broad street from State street to the St. Paul railroad was accepted; the other bids were referred to the City Attorney and the Board of Public Works, who are to consult with the Beloit Traction Company and see if it is their intention to put on a sprinkling car, as they were ordered to do last year.

## MISCELLANEOUS

**Centreville, Ala.**—Bibb County will erect \$20,000 jail.—Judge W. Pratt is interested.

**San Francisco, Cal.**—Citizens will vote June 24 on \$4,000,000 bonds for a new City Hall.

**Mountain View, Cal.**—The Board of Trustees is considering sites for town hall.

**Sacramento, Cal.**—City is considering use of Agricultural Park as a playground.—J. A. Filcher, Secretary State Agricultural Society, is interested.

**Washington, D. C.**—The Bureau of Manufactures is in receipt of a communication from the commercial delegate to a foreign embassy in Washington, advising that a business man in his native country would like to be placed in touch with some American manufacturers of voting machines, with a view to introducing them in that country.—Address No. 3298.

**Washington, D. C.**—Extensive plans for the improvement of the bathing beach and the ground nearby are being made by Dr. William P. Hudson, Superintendent, and Dr. William Tindall, Chairman of the Committee on the Bathing Beach, under the direction of Commissioner West; plans contemplate the use of the tidal basin as a bathing beach for expert swimmers, the filling in of the old fish-hatching pools used last summer for swimming, the establishment of a large athletic field for boys under sixteen years of age on land, where the pools were, at Seventeenth and B streets, and the enlargement of the cement pools at the present site of the bathing beach for use by persons learning to swim.

**South Jacksonville, Fla.**—Citizens will again vote on bonding town for \$50,000 for improvements.

**Tampa, Fla.**—Citizens will vote May 18 on \$75,000 bond for a city hall and \$30,000 for a city hospital.

**Columbus, Ga.**—City will vote July 24 on \$75,000 bonds to erect hospital.

**Macon, Ga.**—Mrs. Morris Hupp will erect a drinking fountain in one of the parks as a memorial to the late Morris Hupp.

**Bloomington, Ill.**—Architect Geo. H. Miller is preparing plans for a boat house and other park buildings to be erected for the Park Commissioners.

**Dupo, Ill.**—Architects L. Pfeifferberger & Sons, East St. Louis, are preparing plans

for a \$2,500 town hall.—C. Linderman, Treasurer.

**Moline, Ill.**—The Park Committee has recommended the following things which must be done before Sylvan Park is really ready: Sand on rip-rapping; a drinking fountain on the southwest corner; red cinder walks wherever needed, and completion of minor details such as flowers, trees, etc.

**Baltimore, Md.**—The Board of Public Improvements has approved ordinances providing for the acquisition of property on Baltimore and Catharine streets for a park site; also to purchase a site for a public comfort station and public bath in the northeastern section of the city; last ordinance carries a \$26,000 appropriation.

**Boston, Mass.**—Council has passed proposed \$989,500 loan bill; of this amount \$99,500 is for new playgrounds and improvements, \$5,000 for a new bath house, \$35,000 for a women's addition L street bath and \$75,000 for a gymnasium.

**Falmouth, Mass.**—Town has voted \$4,500 to erect suitable landings on the east and west sides of Deacon's pond harbor.

**Lynn, Mass.**—Councilman Pyne has presented an order requesting the Committee on Finance to appropriate \$1,500 for the improvement of High Rock Park.

**New Bedford, Mass.**—Edmund O'Keefe has recommended that changes be made in the construction plans for the municipal office building.

**Shirley, Mass.**—Town has voted \$1,800 for playgrounds.

**Battle Creek, Mich.**—Citizens voted to borrow \$150,000 for the erection of a City Hall.

**Hardwick, Minn.**—Bids will be received by the Denver Board of Supervisors until 2 p. m., April 24, for the purchase of \$1,000 annual town bonds.—J. F. Matthieson, Chairman.

**Durant, Miss.**—Castleberry Bros. have decided to install an ice plant.

**University, Mo.**—Citizens have voted to issue \$65,000 bonds for the erection of a City Hall.—E. G. Lewis, Mayor.

**Helena, Mont.**—A. B. Leech Company, Chicago, has been awarded \$105,000 Clark and Lewis County bonds.

**Atlantic City, N. J.**—T. Chalkley Hatton, Wilmington, Del., has prepared a report on proposed canal project, and has estimated the approximate cost at \$364,000 for constructing lateral drains in conjunction with the drainage canal plan from Reading Depot to Inlet on north side of Atlantic avenue.—Carrere & Hastings, New York City, Architects of the canal project.

**Brooklyn, N. Y.**—City is considering the increasing of the number of motorcycle policemen.

**Buffalo, N. Y.**—Bids will be received April 26, noon, by Comptroller Zimmerman for \$331,500 Buffalo River improvement bonds.

**Buffalo, N. Y.**—Superintendent of Parks Seymour has asked for a \$110,000 appropriation to establish greenhouses for the propagation of flowers.

**Buffalo, N. Y.**—Council has passed ordinance establishing a park in the territory bounded by Smith, Wilson, Playter street and Broadway.

**Manhasset, L. I., N. Y.**—Citizens have voted to establish a public park to be owned and maintained by the township of North Hempstead; plan is to reconstruct the meadows and establish thereon a public park.

**Newburgh, N. Y.**—City has been asked to appropriate \$800 for planting trees along Broadway; 300 trees will be purchased.

**Poughkeepsie, N. Y.**—The Daughters of the American Revolution have decided to accept the offer of the Allen property, west of Grove street, in that city, for a playground.

**Utica, N. Y.**—Park Board has asked for \$50,000 to begin improvement.

**Eldridge, N. D.**—Town has voted to erect a Town Hall; cost, \$1,500.

**Grand Forks, N. D.**—City has decided to purchase new uniforms for the Police Department.

**Dayton, O.**—Council has passed the ordinance appropriating \$10,500 to repair and extend the Steele dam.

**Dayton, O.**—Council has appropriated \$15,000 from the park fund for the improvement of McKinley Park and the Great Miami Boulevard.

**Elmwood Place, O.**—The plans of Architect Moosemiller have been accepted for the village Town Hall.

**Youngstown, O.**—Bids will be received May 10, 2 p. m., for \$5,000 South Side Park and \$5,000 East Side Park bonds.—W. L. Davies, City Auditor.

**Ambridge, Pa.**—Council is considering the purchase of an improved road scraper.—W. O. Hershe has made a proposition.

**Beaver, Pa.**—Citizens have defeated a \$15,000 bond issue for the erection of a municipal building.

**Bellevue, Pa.**—Borough will vote May 22 on \$25,000 bonds for a new Borough Hall and fire engine house.



**Phoenixville, Pa.**—Council has passed ordinance authorizing Street Committee to purchase a concrete mixer; cost, \$700.

**Birdsboro, Pa.**—John Shipp, Samuel Ward and W. O. Geiger have been appointed a Committee to inquire into cost of placing numbers on the houses and placing markers on the corner of streets, designating the name of streets.

**Donora, Pa.**—Borough is considering erection of a municipal building; bonds will be issued.

**Harrisburg, Pa.**—F. W. Mueller, John F. Mueller and John A. Staley were granted charters for the Pittsburgh and Suburban Tunnel Company and the Interurban Tunnel Company; each company is capitalized at \$5,000; Interurban Company gets the right to construct a tunnel from Doan street, near Woodville avenue, Twentieth Ward, passing under the Monongahela River to Liberty avenue and Water street, the entire length being 6,197 feet; the Suburban Company is to build a tunnel from Library avenue and Tenth street to Melwood street, Oakland, the total length being 13,340 feet.

**Philadelphia, Pa.**—Council is considering the establishment of a new police and patrol station at Twentieth and Butterwood streets.

**Philadelphia, Pa.**—City is considering the establishment of a municipal ice plant.

**Philadelphia, Pa.**—Construction of a city park on a plot of ground which fronts on the Pennsylvania Railroad tracks is advocated in an ordinance introduced in Select Council by Harry Ransley, of the Second Ward; an ordinance has been introduced in Common Council by Mr. McNellie, of the Thirty-fourth Ward, providing for the building of a small park on the north side of Vodge street.

**Pittsburg, Pa.**—S. J. Wainwright, Jr., Geo. M. Trefall, Geo. E. Moore, John Connelly and J. S. Mullen have given notice through their attorney, George H. Bonner, that an application will be made shortly to the State authorities at Harrisburg for a charter for the Duquesne Tunnel Company; proposed line starts near the northeast corner of Bell tavern, Nineteenth Ward, and runs northwest to the center line of the Pittsburgh Railway Company's Charleroi division, then northeast under the tracks and right-of-way of the railways company and under Mt. Washington to northern end of the railway tunnel, crossing under the Pittsburg, Cincinnati, Chicago & St. Louis Railroad at Carson street; tunnel is to be 50 feet wide and 25 feet high in the center.

**Pittsburg, Pa.**—The State Senate has passed a bill giving the Allegheny County Commissioners the authority to build a traffic tunnel through the South Hills to connect with a bridge reaching the city in the Hump district.

**Smithton, Pa.**—Council has approved the plans of Architect Harman, 6321 First National Bank Bldg., Uniontown, for City Hall; building will be two-story, 60x38 feet, of brick.

**South Bethlehem, Pa.**—Police Committee will purchase light uniforms for the force.

**Dallas, Tex.**—The Board of Commissioners is considering the purchase of two automobiles; the Park Superintendent will also purchase one.

**Hillsboro, Tex.**—Citizens have voted \$16,000 bonds for City Hall and fire station.

**Salt Lake City, Utah.**—City will expend \$3,500 on street signs.—L. C. Kelsey, City Engineer.

**Lynchburg, Va.**—City is considering \$400,000 bond issue for erection of market with auditorium above and hospital.—H. L. Shaner, City Engineer.

**Seattle, Wash.**—Bids will be received at once for an underground comfort station in Pioneer place; cost, \$25,000.—Fred. Schmitz, Park Commissioner.

**Tacoma, Wash.**—The Metropolitan Park Board is considering the purchase of Wapato Lake in the South End and Franklin Lake in the West End for parks.

**Wheeling, W. Va.**—Bids have been asked for the improvement of Caldwell's Run.—C. B. Cooke, City Engineer.

**Madison, Wis.**—Council is considering the planting of shade trees on West Main street.

**Milwaukee, Wis.**—Council is considering the purchase of a park site in the Fifth Ward.

## BIDS RECEIVED AND CONTRACTS AWARDED

**San Francisco, Cal.**—Bids were opened April 8 by the Board of State Harbor Commissioners for furnishing material, except cement and track rails with fish plates, and constructing Pier 36, on water front of city, and the contract has been awarded to the Associated Construction Company for \$364,000.

**Chicago, Ill.**—Bids were opened March 30 by John J. Hanberg, Commissioner of Public Works, for furnishing material and con-

structing three short tunnels to connect Blue Island avenue land tunnel leading from Chicago avenue pumping station to Twenty-second street pumping station, including three concrete bulkheads, placing an 8-foot sluice gate and doing the necessary pumping, and contract has been awarded to the Empire Construction Company, Stock Exchange Bldg., for \$12,750.

**Ottawa, Ill.**—The Street and Alley, Judiciary Committee and Mayor Farrell, after a careful review of the proposals, presented to the City Council for ferrying across the Illinois River during the construction of the bridge, have awarded the contract to Frank Bellrose; the amount of the contract is \$4,250 and provides for the operation of the ferry for a period of 90 days. The schedule of running is to be fixed by the Street and Alley Committee and not more than six minutes shall be consumed in the crossing of the river; the service is to continue for the full twenty-four hours of each day if required by the city.

**Baltimore, Md.**—The contract for painting the iceboat Latrobe was awarded to the Skinner Shipbuilding Company for \$735.

Bids were opened for the Harbor Board for painting the tug Baltimore and referred to the Board for tabulation.

The contract for furnishing coal to the Court House was awarded to the Enterprise Fuel Company.

**Cambridge, Mass.**—Patrick McGovern was the lowest bidder among twelve whose bids were opened by the Boston Transit Commission at Boston for the construction of the first section of the new Cambridge subway; his bid for construction of the subway by free air was \$469,097.50, and by the use of compressed air, \$531,940. The Commission did not make any award, but will consider all the bids before awarding the contract. The other bids were as follows:

	Free Air	Compressed
Peter W. Hill.....	\$749,655.00	\$917,027.50
Manufacturers Con-		
tracting Co., N. Y. . .	592,060.00	768,387.50
W. H. Smith Co. ....	524,730.00	691,947.50
Bruno & Pettiti. ....	530,950.00	588,355.00
United Engineering &		
Contracting Co. ....	481,800.00	623,440.00
Coleman Bros. ....	520,207.50	585,662.50
Coughlin & Shields. .	605,450.00	664,340.00
Northeastern Con-		
struction Co. ....	532,890.00	580,150.00
Metropolitan Con-		
tracting Co. ....	488,732.50	534,745.00
Jones & Meehan. ....	546,115.00	608,515.00
Joseph McCabe. ....	581,683.75	1,011,148.75

**Missoula, Mont.**—South Third street is to be connected with the Higgins avenue bridge as it was before the flood, this being finally decided on when Council accepted the bid of the Burrell Bridge and Construction Company for the construction of a retaining wall along the north boundary of the street joining with the south abutment of the Higgins avenue bridge, at a cost to the city of \$7,300 and to the County of approximately \$4,000; Engineer T. A. White, representing Waddell & Harrington, and Engineer B. W. Sweet, of the Burrell Bridge Company, were present at the meeting with plans for several styles of wall.

**Atlantic City, N. J.**—Bids for making alterations to City Hall were received by Council and referred to the Property Committee, as follows: Wilbur Beaumont, \$13,300, low; Edward L. Bader, \$16,700; Thompson & Stiles, \$16,345; H. B. Deal Company, \$23,917; C. G. Murland, \$16,492.

**New York, N. Y.**—One bid only was received March 26 by Lt.-Col. S. W. Roessler, Corps Engineers, U. S. A., Army Bldg., New York, for removal of rock in North River off Pier A, New York Harbor. It was for \$37,450 and was submitted by R. G. Packard Company, 130 Pearl street, New York.

**Durham, N. C.**—City has awarded contracts to J. E. Dickson & Co., city, at \$16,113.72 for erection of city market; 60x164 feet; meat department, 60x101 feet, with 12 stalls; vegetable department, 25x60 feet, and fish, 24x60 feet; each meat stall to have private cold storage; cesspools in floors of each department; wagon shed, 18x154 feet, and another 10 feet wide; interior of building to have six feet of wainscoting and enamel brick; remainder of interior to be finished with impervious brick; exterior of gray impervious brick; roof of clay tiling; walls capped with terra-cotta; conduit system of electric lighting; also gas lights.—Hill C. Linthicum, Architect; George W. Woodward, City Clerk.

**Waverly, O.**—Bids for making maps of Pike County were opened by O. E. Emory, County Auditor, April 5, and the Bentin Township map was sold to A. P. Christian, city, for \$960 and the Miffin Township map to W. H. Monahan, of Jackson.

**Chester, Pa.**—For the keeping of the patrol wagon there were three bidders: Joseph Dalphey, \$50 per month; R. R. Milbourne, \$45 per month; John Worthington & Sons, \$60 per month, and Milbourne was awarded contract; Dalphey had the contract last year.

## PATENT CLAIMS

817,821. Ditching Machine. Charles F. White, Denver, Col. Serial No. 435,256.

In a ditching machine, the combination of a conical cutter head, having a plurality of earth receiving pockets arranged around its base, which open into the head; an adjustable supporting frame for the head; a chute adapted to receive the earth from the pockets; a movable wing in said chute for deflecting the earth; a pair of conveyors beneath the chute; and means for rotating the head, and for propelling it forward and for operating the conveyors simultaneously.

917,892. Sewer Cleaning Apparatus. William A. Pierce, Boston, Mass. Serial No. 456,043.

A dredging bucket of the character set forth, consisting of a bucket open at its front end and closed at its rear end and divided longitudinally to form an upper and a lower section, horizontal pivots pivoting the two sections together at their forward ends and a latch detachably connecting their rear ends, and hauling and suspending chains connected to the front edges of both sections at opposite sides of said pivots, the front of the lower section being extended forwardly to form a scoop-like projection, and the body of the bucket being tapered rearwardly and being provided with a pair of spaced runners on its under side extending the full length of the bucket and the scoop-like projection, the lower edge of the runners being horizontal.

917,918. Water Purification System. John F. Wixford, St. Louis, Mo., assignor to Wixford Water Patents Company, St. Louis, Mo., a corporation of Missouri. Serial No. 258,228.

A system of water purification comprising a continuously open settling basin of the kind used in municipal water works plants, a conduit leading from a source of water supply to said basin, a plurality of upwardly extending submerged pipes in said basin connected to said conduit, and a current distributing baffle near the delivery end of said basin.

917,974. Tunneling Machine. Edward F. Terry, New York, N. Y., assignor to The Terry, Tench & Proctor Tunneling Machine Company, a corporation of New York. Serial No. 283,880.

In combination a carriage, a rotating cutter head carried thereby, a plurality of carriers on said head, gangs of detachable rock cutting points carried by the carriers, means whereby said carriers are mounted upon said head with freedom of reciprocation to and from the same, means whereby said reciprocation is produced, and means for simultaneously advancing the carriage.

917,977. Road Grader. Samuel A. Ulrich, Mendota, Mo. Serial No. 450,040.

In a device of the character described, the combination with a scraper, a draft animal connecting means connected to said scraper, of vertical legs, each leg provided, at its lower end, with a spur, and provided near its upper end with an elongated slot or aperture, and means positioned in said aperture and connected to said scraper for raising and lowering said scraper.

918,016. Ditch-Filling Mechanism. William Dalton and Joseph H. Clements, Jr., Schenectady, N. Y. Serial No. 463,158.

In a ditch-filling mechanism, the combination of a motor vehicle, a scraper located in advance thereof, frames secured at their forward ends to the scraper and journaled at their rear ends on the motor vehicle, and means for raising and lowering the scraper.

918,156. Road Construction and Art of Making Same. Frank S. Hutchinson, Flushing, N. Y. Serial No. 433,500.

The herein described improved roadway, comprising a layer of broken stone, a fine filler mingled with the stone and with a bituminous binder which is absorbed by the filler and overflows to form a covering for the stone, and a surface formed of crushed rock rolled into the binder.

913,140. Gasoline Fire Engine. William F. Gibbs, Philadelphia, Pa. Serial No. 414,313.

In a fine engine the combination of a frame, an engine on said frame, a pump on said frame driven by said engine, a gasoline tank on said frame, a casing inclosing said gasoline tank to form a water jacket around said first mentioned tank, a pipe connecting said gasoline tank with said engine, and an overflow pipe from said outer casing surrounding the said gasoline tank.

918,176. Water Meter. Chris Lory, New Windsor, and Charles A. Lory, Fort Collins, Colo. Serial No. 378,253.

The combination of a carriage, means controllable by changes in water level, for shifting said carriage into different positions, a revolvable member mounted upon said carriage, a comptometer connected with said revolvable member and actuated thereby, rollers mounted upon said revolvable member in order to facilitate the travel of

the carriage, and a conical driving member engaging said rollers for the purpose of turning said revoluble member.  
918,366. Reinforced Concrete. Hamil J. Querreau, Baldwinsville, N. Y. Serial No. 396,476.

In combination with the abutments of an arch, a reinforced concrete arch section having its ends resting on said abutments and provided with a reinforcing bond embedded therein between its inner and outer faces, said arch section being composed of longitudinal sections having their adjacent edges beveled inwardly and outwardly from said bond, the adjacent faces abutting against each other below the bond and concrete filling in the spaces between said adjacent faces at the outer side of said bond.

918,373. Ditching Machine. Benjamin M. Rolph, Franklin Grove, Ill. Serial No. 445,958.

In a device of the class named, a rotary ditching wheel; a plurality of scoops, supported on the edge of said wheel, and formed or spaced-apart bars; diagonal cutting knives, at the forward ends of said scoop, alternately disposed, and spring-controlled gates at the rear ends of said scoops, substantially as described.

918,384. Waterproof Cement. Melville M. Smith, Fredonia, Kan., assignor to the Fredonia Portland Cement Company, Fredonia, Kan., a Corporation of New Jersey. Serial No. 452,182.

The herein described process of making white waterproof cement, which consists in the admixture of lime and clay as free as possible from iron, together with a flux, burning the resulting mass to the verge of fusion, that is to say, beyond the sintering limit, and grinding the resulting clinker with a mixture of clay free from iron.

918,448. Pump-Valve. Joseph E. Hill, Menasha, Wis., assignor of two-thirds to William M. Gilbert and Theodore M. Gilbert, Neenah, Wis. Serial No. 456,164.

A pump valve, consisting of a circular metallic skeleton, a groove in the working face of the skeleton having its inner and outer inclosing walls arranged parallel with the reciprocating movement of the valve, two rings of a different material or quality from that of which the valve seat is formed, a cross section of each ring being inclosed by a plurality of straight lines, one ring having a larger in and outside diameter than the other, the larger one having a beveled inner edge and the smaller one a beveled outer edge, the larger ring being held within said groove within its outer wall and the smaller ring within its inner wall, and a lip integral with the ring, one upon the larger ring for extending over the outer wall of said groove, and one upon the smaller ring for extending over its inner wall, and a metallic ring having its outer and inner edges beveled to fit the bevel of said ring edges, and fitted to be secured in said groove between said two rings with screws, and to engage the beveled edges of said two rings and hold them in position within the groove.

918,456. Flushing-Tank. Charles N. Marcellus, Grand Rapids, Mich. Serial No. 412,453.

A flushing tank molded in a single piece of ceramic material and having an outlet, and an overflow upon one wall of the tank, said overflow extending within the bottom of the tank to the outlet, and a gutter adjacent the bottom of the tank for receiving moisture accumulating upon the outer surfaces of the walls of the tank, said gutter having an outlet passage opening into the outlet of the tank, the gutter being inclined downwardly from its ends toward said passage, and a guide arm formed within the tank and overhanging the outlet.

## INCORPORATIONS

American Civil Service Institute, Inc., Wilmington, Del.; capital, \$350,000. Incorporators: Joseph A. McNulty, Henry Van Vleet, George M. Yurker, Buffalo.

American Sewer Pipe Company, New Orleans, La.; capital, \$25,000. Incorporators: John T. Delahey, Alfred L. Blum, William F. Gleason and others.

Armored Concrete Bridge Co., Albany, N. Y.; to erect and repair buildings and bridges; capital, \$15,000. Incorporators: Edward J. Doyle and Hugo J. Scheurmann, Albany; James J. Doyle, Utica, N. Y.

Atlantic Contracting and Construction Co., Newark, N. J.; real estate; capital, \$50,000. Incorporators: James M. Reilly, 764 Broad street; Charles E. McDowell, 22 Clinton street, both of Newark; Leonard C. Ketchum, 92 William street, New York.

Caroga Electric Power Co., Glens Falls, N. Y.; gas and electricity for light, heat and power; capital, \$50,000. Incorporators: James H. Cross, Johnstown, N. Y.; Theodore D. Cross, Sandy Hill, N. Y.; J. Ward Russell, Glens Falls, N. Y.

Charlotte Docks Co., New York, N. Y.; to operate docks for loading and unloading coal and other freights; capital, \$125,000. Incorporators: O'Donnell Iselin, 155 Main

street; Samuel M. Havens and William F. Strang, 15 Rochester Savings Bank Building, all of Rochester.

Dimmick Pipe Co., 217 La Salle street, Chicago, Ill.; to sell cast-iron pipe and fittings; capital, \$1,000,000. Alabama corporation.

Eureka Trap Rock Quarry Co., Queens; to quarry and dress marble and granite; erect buildings and structures; capital, \$10,000. Incorporators: Joseph R. Walsh, Laurence H. Dooley, T. John McKee, 20 Nassau street, New York.

Georgia Lighting Company, Macon, Ga.; capital, \$10,000. Incorporators: A. J. Smith, W. C. Meredith and Patrick Lyons.

International Power Generator Co., Wilmington, Del.; Corporation Trust Co.; capital, \$50,000. Incorporators: E. E. McWhiney, Philadelphia, Pa.; S. Moor, Lima, Pa.; Harry W. Davis, Wilmington, Del.

Jacobs & Davis, Inc., Millbrook, N. Y.; civil engineers, general contractors and ship builders; capital, \$250,000. Incorporators: Charles M. Jacobs and J. Vinod Davis, 30 Church street; Emmet D. Buel, 10 East Eighty-fifth street; Thomas G. Anthony, 348 West One Hundred and Eighteenth street, all of New York; George D. Snyder, New Rochelle, N. Y.

King Automatic Platform Company, Washington, D. C.; capital, \$300,000. Incorporators: W. M. King, president; J. P. Edwards, 2220 H street, N. W., vice-president; I. H. Saunders, the Olympia, secretary and treasurer, all of Washington.

Metropolis Engineering Co., Jamaica, N. Y.; engineering, surveying and contracting; capital, \$20,000. Incorporators: Oscar Erlandsen, 15 West Eighty-eighth Street, New York; Charles W. Smith, 393 Lewis Avenue, Brooklyn; Thomas W. Baldwin, 616 W. 135th Street, New York.

Odorless Scavenger Company, Nashville, Tenn.; will conduct odorless excavating by vacuum system. Incorporators: H. E. Fletcher and B. S. Ham.

Philadelphia Construction & Concrete Co., Wilmington, Del.; Corporation Trust Co. of America; capital, \$100,000. Incorporators: E. E. McWhiney, Philadelphia, Pa.; S. Moor, Lima, Pa., and Harry W. Davis, Wilmington, Del.

Phoenix Light & Power Co., Jersey City, N. J.; to operate gas plants; capital, \$200,000. Incorporators: H. O. Coughlan, S. A. Anderson, J. R. Turner, as above.

Port Jervis Light and Power Company, Port Jervis; to manufacture gas and electricity for light, heat and power; capital, \$300,000. Incorporators: John E. Daily, 15 Broad street; J. Dexter Crowell, 21 State street; Robert C. Maroney, 35 Wall street, all of New York.

Riverside and Fort Lee Ferry Company, New York; ferry; capital, \$1,000,000. Incorporators: John B. Summerfield, Charles A. Lewis, Henry C. Everdell, Henry M. Haviland, Joseph F. Collins, New York.

Rockland Water Works and Supply Company, Piermont, N. Y.; supply water; capital, \$50,000. Incorporators: J. Wesley Drumm and Morris Dienstag, Sparkhill, N. Y., and Isaac H. Parsells, Tappan, N. Y., and others.

Southern Construction Company, Harri-man, Tenn.; will quarry and crush stone, construct cement buildings and manufacture cement blocks; capital, \$50,000. Incorporators: W. H. Grannis, T. A. Christman, W. H. Spencer and others.

Stephens Engineering Co., First National Bank Building, Chicago; engineering and construction work; capital, \$50,000. Incorporators: Claude D. Stephens, Alton C. Stephan, Isaac Thompson, Jr.

St. Louis County Construction & Development Co., St. Louis, Mo.; capital, \$25,000. Incorporators: E. J. Hanley, St. Louis; Math A. Kempf and Charles Schueler, both of Manchester.

Searles Power Company, Monmouth, Ill.; to operate power plants; capital, \$20,000. Incorporators: J. F. Searles, H. J. Fischer, Nels Jensen.

St. Louis Sand and Gravel Company, Webster Groves, Mo.; capital, \$100,000. Incorporators: D. C. Hartwell, F. C. Gensler and F. J. Schneeberger.

United Meter Improvement Company, Wilmington, Del.; capital, \$25,000. Incorporators: F. M. Shive, S. E. Roberson, Harry W. Davis, Wilmington.

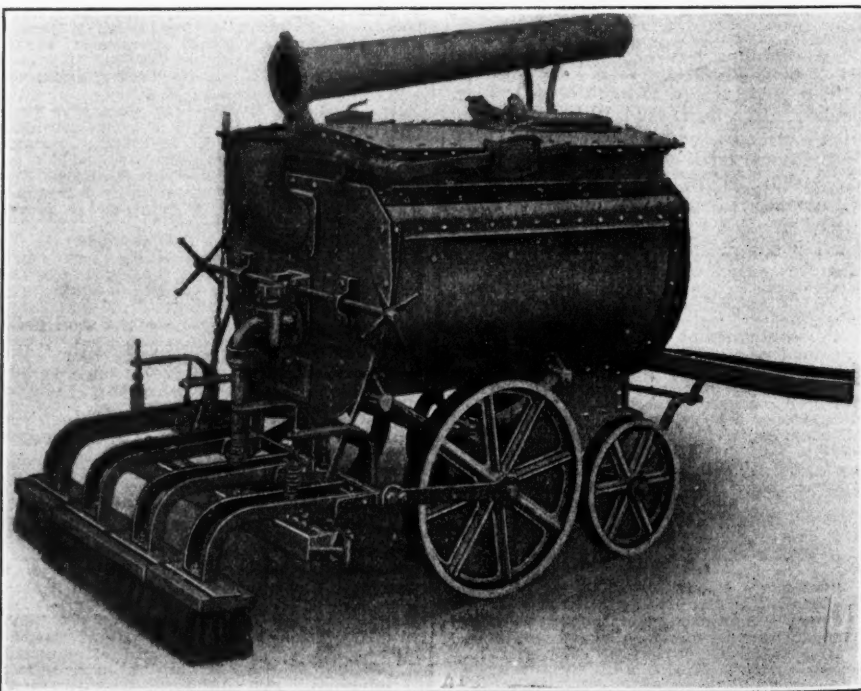
Wilkinson-Wright Contracting Company, Birmingham, Ala.; capital, \$4,000. Incorporators: Robert H. Wright, president and treasurer; J. Wilbur Wilkinson, general manager.

W. M. Sheehan & Co., contracting and construction, electrical work; capital, \$50,000. Incorporators: William M. Sheehan, Frank C. Joutas and Edward F. McAviney, all of No. 136 Liberty street, New York.

## MUNICIPAL APPLIANCES

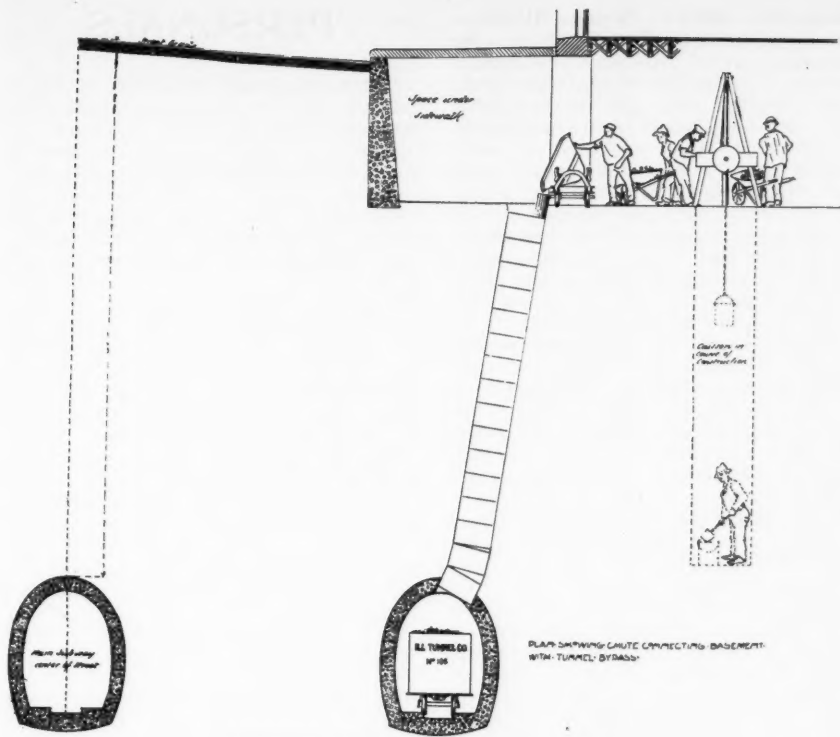
### Road-Tarring Machines

THE Phoenix Engineering Company, Ltd., of Chard, Somersetshire, England, has designed several machines for spreading tar over roads. One of these machines spreads the tar, another, as shown in the illustration, has a set of drag brushes which can be quickly raised, and the pressure on which can be regulated, following the stream of tar. Yet another has a rotating brush with the same object, or the result may be obtained by hand-brushing, with portable tanks for hand-spraying. In any case it is important that the tar be applied hot to a dry road, from which the dust has been previously swept. To return the dust to the road after the tar has been applied is to prevent its being properly absorbed by the road and to make black mud on the surface. It is better to close the road for a while after tarring, and then to sprinkle the surface with fine shingle, or, if that cannot be got, with stone and granite chippings.



ENGLISH ROAD-TARRING MACHINE





DISPOSING OF EXCAVATIONS IN CHICAGO

### Disposal of Excavated Material

GEORGE W. JACKSON, INC., Chicago, Ill., is prepared to receive and dispose of excavated materials from cellars, as well as refuse materials. The dirt is carried through the tunnels of the Illinois Tunnel Company system to a disposal system, where it is delivered through chutes onto specially constructed scows and transported to Lake Michigan points. The tunnel system consists of about 56 miles of subway running under the streets of the business sections of Chicago. Side tracks are run under buildings or wherever it is desired to place cars for the reception of materials. A chute is run from the building or cellar where excavation is carried on down to the tunnel, where cars are placed to receive it. The excavated material may be delivered into the chute by wheelbarrows, buckets, cars, or in any convenient way.

### TRADE NOTES

**Cast-Iron Pipe.**—Chicago: Quotations: 4-inch, \$27.50; 6 to 12-inch, \$26.50; 16-inch and up, \$24.50. Birmingham: The aggregate of small orders from the Middle West is attractive, and larger contracts are expected from Pacific Coast points. Quotations: 4 to 6-inch, \$26; 8 to 12-inch, \$25; over 12-inch, average, \$24. San Francisco: The use of cast-iron pipe on the Pacific Coast is gradually increasing, and it is recognized as the standard material in water systems where freights are not prohibitive. New York: Inquiries have been quite small. Quotations: 6-inch, car-load lots, tidewater, \$23.50.

**Lead.**—The market is firm. The advance in the price of shipment lead five points last week by the American Smelting & Refining Company was no surprise. Previous to the announcement, it was thought lead would be advanced to 4.25 cents instead of 4.15 cents, as was the case. In St. Louis the market is stronger than anywhere else, outside sellers asking 4.10 cents at that point. The New York market

has, in second hands, much lead bought at lower prices, which they are willing to dispose of for prompt cash at 4.17½ cents to 4.20 cents. Numerous inquiries have been made regarding prices, but the business ruling is now going to the leading interest.

**Motor Patrol Wagons.**—The Rapid Motor Vehicle Co., Pontiac, Mich., which has made a success in commercial vehicles and pleasure busses, is now putting on the market motor patrol wagons and ambulances. These have all the successful features both of mechanism and construction that have made the Rapid famous. The engine is of the two-cylinder opposed type with cylinders 5¼ by 5 inches, and develops 30 hp. The transmission is of the planetary type with two speeds forward and one reverse. The patrol wagon will carry ten people inside the screened body and two on the driver's seat. The cost of the wagon is \$2,400. A comparison of the costs between horse-drawn and motor vehicles figured over a period of five years is claimed to show a material advantage on the side of motor vehicles.

**Tanks.**—The U. S. Wind Engine & Pump Company, of Batavia, Ill., is sending out a catalogue and price lists of their product. This company makes a specialty of wood tanks for water storage and fire protection, but also makes steel tanks. Their wooden tanks are made from "Tank Grade," clear red Louisiana swamp cypress, which is one of the best woods obtainable for this purpose, or from carefully selected pine. The sizes of the tanks vary from a capacity of 117 gallons to over 100,000 gallons with a variation in cost from \$15 to \$1,500. They also manufacture supporting towers for tanks where necessary.

**Electrical Business Improving.**—It is stated that the Westinghouse Electric and Mfg. Company, East Pittsburgh, did 30 per cent more business in March than in February. It is also stated that the Westinghouse Machine Company, also of East Pittsburgh, received more orders in March than in any one month for a year and a half.

**Lighting Combination.**—The Citizens' Light, Heat and Power Company, Johnstown, Pa., has been formed by a combination of the Citizens' Light, Heat and Power Company, capitalized at \$1,000,000; the Consumers' Gas Company, capitalized at \$600,000; the Johnstown Fuel Supply Company, with a capitalization of \$400,000, and the Johnstown Electric Light Company, with a nominal capitalization of \$1,000. The capital stock of the new company will be \$3,200,000. Of the amount \$1,200,000 will be in preferred stock and \$2,000,000 will be in common. The bond issue will be of \$3,000,000, the total amount of the bonds and stock being \$6,200,000.

**Cast-Iron Pipe.**—Central Foundry Company, 37 Wall street, New York, N. Y., has issued a well-arranged book devoted to Universal cast-iron pipe, in which a history of the industry is given, and there follow articles on pipe connections, causes of main leakage, deterioration by electrolysis and other corrosive agents, etc., which will be very useful to contractors. Tables for ascertaining the leakage in ordinary cast-iron distributing systems are given, together with tables of leakage of gas in distribution and a discussion of losses from such leakage. Views of installations of Universal pipe for gas systems, a high pressure system for carrying brine for refrigeration, etc., are shown and described. Pipe, tees and couplings, universal branches, eccentric reducers, drip pots and fittings are illustrated and prices are given.

**The Webco Pipe Union.**—F. W. Webb Mfg. Company, 50-60 Elm street, Boston, Mass., manufactures a pipe union known as the Webco, which has as its essential feature bronze to iron seats, with no cast-iron contacts, designed to give a perfectly tight joint at the back as well as on the face of the ring. The nickel-bronze seat ring is inserted under hydraulic pressure, making practically one solid piece of the two metals, and is proportioned to give the correct amount of metal to effect an equalizing contact on the bearings; any further expansion of the bronze has a compensating effect to distribute the pressure equally. The ring is held in place by thick retaining walls of iron, and is let into the iron at a sharp angle to the plane of the seat to provide a wedging effect when the ring expands, so that the joint cannot open up. The ring does not project into the bore of the body portion of the union beyond the bottom of the threads, so that if the end of the pipe is screwed clear in it cannot disturb the location of the ring and force it out of position. The separation of the two metal ends is accomplished without leaving a recess at the seat where sediment might collect. There is a ball seat at the back joint as well as at the face joint. The two surfaces have the same contour. The pressure that brings the ends of the union together is equally distributed, the principle of the inclined plane being applied to both joints. The ends of the union have flats to provide a wrench hold.

**Road Construction.**—E. D. Robertson, Commissioner, Charlotte Court House, Va., wants data on methods and machinery for road construction; \$150,000 is available for improvements.

**Brakes.**—Circular 1,758 of the Westinghouse Electric and Manufacturing Company, Pittsburgh, describes a large variety of brakes for different types and sizes of electric motors used in operating cranes, hoists and heavy machinery.

**Municipal Castings.**—E. M. Burr & Co., of Champaign, Ill., are now preparing a new and revised catalogue of their product which they will be glad to send to those interested. This company manufactures all kinds of catch-basin inlets, curb grates, gutter grates, combined curb and gutter grates, inlets with and without catch basins and with and without covers. They also have a complete line of manhole tops and covers. Of particular interest to the user of these articles is the fact that all covers have the drop handle which is ready when needed and out of the way at other times. This company also manufactures a special curb and gutter catch basin; all their designs can be used in this way, but a special sectional casting which they put out is particularly adapted to this work. The Burr company is also prepared to get out special castings.

**Natural Gas Line.**—From information received by Capt. O. B. Steele, Baton Rouge, La., from the Everett-Bush Natural Gas Syndicate, the pipe line of the Natural Gas Company will come down the west side of the Mississippi River from the mouth of the Red River, and across the Mississippi just above Baton Rouge, going from there down the right of way of the Louisiana Railway and Navigation Company. This route will save about 20 miles over any other possible route between the mouth of the Red River and New Orleans. The engineers have made a survey of the two routes, and believe that the route down the west side of the Mississippi River to Baton Rouge would be cheaper and shorter than one down the east bank. The Mississippi River could also be crossed here with greater ease and at less expense than at the mouth of the Red River, which stream will be followed by the Natural Gas Company in piping from the Caddo fields. Captain Steele has received information that the representatives of the Everett-Busch syndicate will be in Baton Rouge and make an effort to secure a franchise there as soon as they complete their work in New Orleans.

**Profitable Power Franchise.**—The broad franchise rights enjoyed by the Washington Water Power Co. of Spokane are proving profitable. Gross earnings for 1908 were \$2,437,406, an increase of \$343,124 over the previous year, and almost exactly double those of 1905. The net income was \$1,111,353, and the net surplus after paying dividends of \$351,141 was \$220,289, which made the total profit and loss surplus \$874,150, of which \$669,668 was cash on hand. There was an increase of 25 per cent in the number of incandescent lamps in use and everything else in that line in about the same proportion. The number of passengers carried was 19,520,942, as compared with 17,249,527 in 1907 and 11,291,958 in 1905. The company's blanket charter confers the right to own and operate mills, canals, electric light and power plants, street railways, parks, dance halls, baths, etc.

**Soil Pipe.**—The addition to the soil pipe foundry of the Bessemer Soil Pipe Company, Bessemer, Ala., is practically complete, and it will be put in operation in a few weeks.

**Road Construction.**—O. S. Hawkins, Secretary of Parkersburg-Williamstown Boulevard Association, Parkersburg, W. Va., wants information on methods and equipments for constructing permanent roads.

**Creosoted Wood Paving Blocks.**—The Ayer & Lord Tie Company, Incorporated, 1515 Railway Exchange, Chicago, Ill., has issued a sixteen page booklet dealing with the above subject, which can be secured on application. This booklet does not treat of their product particularly but with creosoted blocks generally. Many examples are cited of the success attending the use of such blocks and attention is called to their long life, quietness and sanitary qualities. The Ayer & Lord Tie Company is one of the largest wood treating companies in this country and have long treated timber for some of the largest railroad systems in the country. Their extensive plants and varied experience and study of woods and wood treating make it possible for them to produce a particularly satisfactory creosoted wood block.

**Rock Crushers.**—The Marsh Company, 910 Old Colony Building, Chicago, Ill., manufacture the Kennedy gyratory crusher, suitable for contractors and municipalities wishing to crush their own stone for macadam or concrete. This crusher has many points which make it desirable for this purpose. It is not necessary to remove the hopper when it is desired to remove the spider, crushing head or main shaft. The spider is heavy and so designed as to permit the rock to pass from one side to the other. The head is easily removed from the shaft and held firmly in place when in use. Dust collars with packing effectually protect the bearings. The eccentric is run in a bath of oil and is self-aligning. The number three portable crusher can be moved anywhere. Drive can be by means of portable engine or other power. This plant is particularly useful where old cobblestone pavement is to be broken up or where two or more quarries serve as a supply. The frame can be lowered to the ground so as to give a firm foundation and bring the top down as low as the ordinary jaw crusher. Besides the crushers all kinds of crushed stone machinery are built including screens, elevators, etc.

**Pipe Plant Purchased.**—The plant of the Birmingham Pipe and Casting Company, located at Birmingham, Ala., which has been idle for eighteen months, has been acquired by the American Radiator Company, Chicago, and will be put in operation as soon as the necessary equipment can be installed.

**Splicing Wood Pipe.**—A. Wyckoff & Son Company and the Wyckoff Wood Pipe Company, Elmira, N. Y., have consolidated under the name of A. Wyckoff & Son Company. Both companies were manufacturers of the well-known Wyckoff Machine-Made Wood Stave Pipe for municipal and mining purposes. The new plant is being doubled in size, and is expected to be completed shortly.

**Grab Buckets.**—The Mead-Morrison Manufacturing Company, Cambridge, Mass., has issued a catalogue devoted wholly to grab buckets of a great variety of types to meet the wide range of uses of such apparatus. The special purpose and construction of each type is explained and a list of the standard sizes in which it is made is given. Probably few engineers and contractors can examine this pamphlet without being surprised at the many varieties of grab buckets that are required to answer what may be called regular requirements.

## PERSONALS

ANETT, MAMSON, Assessor of Cedar Falls, Ia., who has held the position for forty-two years, has been re-elected.

ASHWORTH, R. H., City Engineer of Colorado Springs, Col., has been re-elected.

BACHMAN, ELIAS, Chief of the Fire Department of Hazleton, Pa., for twenty-six years, died recently of apoplexy, aged 69 years.

BARBER, AMZI LORENZO, Ardsley, N. Y., died April 17. Mr. Barber was the organizer of the Barber Asphalt Paving Company, and later of its rival, the A. L. Barber Asphalt Company. He has been perhaps the most prominent figure in the asphalt business since 1876.

BONNER, JOHN H., Mayor of Tyler, Tex., has been re-elected for his fourth term, the honor having been conferred on account of his interest in the upbuilding of the city, as many improvements in the way of public building, street paving, sidewalks and the like have been made since his incumbency.

BRANDEROB, JOHN, Mayor of Oshkosh, Wis., was defeated for re-election by J. C. Voss.

BURCKHALTER, J. C., Chief of the Fire Department of Butler, Pa., has been re-elected by Council; also Chief Joseph Angert and Lieutenant Hays of the police force.

CARLTON, DR. W. W., Pastor of the Methodist Episcopal Church of Mason City, Ia., has been named as Chief of Police by Mayor Fred A. Kirschman because of his aggressive work for municipal reform, and one of the wealthy residents of the city has made a tender of \$40 a month in addition to the regular salary.

CAULDWELL, THOMAS W., Mayor of Morristown, N. J., formerly President of the Civic Association and member of the first Sewerage Association of Morristown, which arranged for the sewerage system now under construction, passed away recently, aged 50 years; the Board of Aldermen has elected Alderman Kinsley Twinning Chairman, and he will act as Mayor.

CLAYTON, ALVAH P., Mayor of St. Joseph, Mo., was the guest of Lu Lu Temple of the Mystic Shrine at Philadelphia, Pa., recently. Mayor Clayton is a Past Imperial Potentate of the order and enjoys the distinction of having instituted Anezeh Temple in the City of Mexico and creating as a noble President Diaz.

CONLIN, JOHN BARNEY, Chief of the Fire Boat Division of the New York Fire Department, is visiting fire officials on the Pacific Coast, and was recently the guest of Chief Shaughnessey at a banquet in San Francisco, when he was presented with a handsome watch charm in appreciation of his valuable suggestions in regard to the new fire boats being built for San Francisco. Chief Conlin was also the guest of Chief James Kenney of the Berkeley, Cal., Fire Department.

COOK, WILLIAM S., City Treasurer and Collector of Taxes of New Bedford, Mass., has been elected treasurer of the Sinking Fund Commission, succeeding James H. Hathaway, resigned.

CORBY, JOSEPH P., Mayor of Butte Mont., has been defeated for re-election by Charles P. Nevin, and former Mayor J. H. McCarthy has been elected City Treasurer.

COWDEN, M. B., City Engineer of Harrisburg, Pa., has been re-elected for a term of three years. John A. Affleck has been elected Water Commissioner for a term of three years.



DAVIS, H. A., Palatka, Fla., has been elected Mayor of the city.

DAVIS, F. A. W., Indianapolis, Ind., president of the Indianapolis Water Company, died April 9. Mr. Davis was connected with the water company since 1881. He was an ex-president of the American Water Works Association, member of the New England Water Works Association, the National Conservation Commission and the Lakes-to-the-Gulf Deep Waterway Association and the Indiana Engineering Society.

DULEY, W. R., Mayor of Little Rock, Ark., has been re-elected by a majority of 1,941 votes, receiving 2,471, to 530 votes for Dr. J. F. Hammett.

EARLEY, THOMAS, Mayor of Pasadena, Cal., has been re-elected over former Mayor William Waterhouse, being the first Mayor in the history of the city to be returned to office for a second term.

FISHER, JOHN F., City Engineer of Williamsport, Pa., has been defeated for re-election by John B. Otto.

FORWARD, JOHN F., Mayor of San Diego, Cal., has been defeated for re-election by Grant Conard, while Don M. Stewart has been elected City Treasurer.

FOSTER, W. A., Street Commissioner of LeClaire, Ia., has been re-elected; August Abraham has been elected Town Marshal to succeed J. W. Bailey, and Dr. Skinner has been chosen Health Officer.

GIBBONS, JOHN J., McKeesport, Pa., has been appointed Chief of Police. Other appointments are: City Solicitor, M. E. Newlin; City Engineer, John Smith; Chief of the Fire Department, M. I. Quinn; Water Commissioner, Fisher Kelly.

GORDON, JOHN B., Chief of the Fire Department of Haverhill, Mass., has been elected Fire Warden of the city under the new fire laws.

GRAHAM, S. C., of Los Angeles, Cal., an oil operator and Chairman of the Recall Campaign Committee; D. K. Trask, former Judge of the Superior Court; J. J. Andrews, member of the Grand Jury which brought about the recall of Mayor Harper and John Topham, have been appointed by Mayor George Alexander as his associates on the Board of Police Commissioners, which Board was under fire during Mayor Harper's regime.

HARSHA, JOHN P., Mayor of Hutchinson, Kan., for ten years, the last six of which were in succession, relinquished the reins of office April 9, when the Commission form of government, with Mayor F. L. Martin at the head and G. W. Winans and C. W. Oswald, commissioners, was instituted, and the retiring executive was presented with a handsome gold watch, chain and Elk's charm.

HEINRICH, JOHN F., of Jefferson City, Mo., has been elected Mayor.

HINE, GUSTAVES, Mayor of Bay City, Mich., has been defeated for re-election by Edward E. Evans; Edward E. Corliss has been elected City Treasurer; Edward E. Prohazka, Comptroller, and Lovell U. Grant, Recorder.

HORLICK, A. J., Mayor of Racine, Wis., has been re-elected.

JIFKINS, HENRY J., City Engineer of Scranton, Pa., has tendered his resignation to Mayor Von Bergen, and W. A. Schunk, First Assistant, is acting as City Engineer.

KENNY, EDWARD, Assemblyman of East Newark, N. J., has been elected Town Attorney of Kearny by the Council, to succeed J. Franklin Crowell, deceased.

KINGSLEY, E. A., Superintendent of Public Works of Little Rock, Ark., has been re-elected; he was formerly in the Engineering Department of the city, and before that was on the engineering corps of the Rock Island Railroad.

McCLINTOCK, J. Y., County Engineer of Monroe County, N. Y., has been elected president of the New York State Association of County Engineers and Superintendents of Highways.

McINTOSH, H. W., City Engineer and Surveyor of Burlington, Vt., has been unanimously re-elected by Council; F. N. Frechette as Street Commissioner, and W. E. Laprese as Sealer of Weights and Measures; J. W. Goodell, Electric Light Commissioner, and P. H. Moran, Fire Commissioner, while Dr. J. N. Courtney has been elected Water Commissioner and Fred B. Wright as Inspector of Electric Wiring, to succeed Carl D. Stockwell, who has been chosen as Fire Warden.

McNEAL, JOHN, City Engineer and Commissioner of Highways of Easton, Pa., has been re-elected for the term of three years.

MARTIN, HUGH, Helena, Mont., was recently elected Mayor of the city without opposition, and the same evening was installed as Exalted Ruler of the local lodge of Elks.

MEANS, EDWARD, Mayor of Bellevue, Pa., a fashionable suburb of Pittsburg, has resigned the office, which pays but \$150 per year, to accept the more lucrative position of City Janitor at \$35 per month, and now sweeps out the city building and cleans the cuspidors.

MILLER, W. H., Mountain View, Ark., has been unanimously elected Mayor; also other officers as follows: Recorder, J. F. Chappell; Aldermen, H. T. Patterson, F. A. Brannock, G. W. Lackey, Ray Case and S. A. McCullough.

PAULUS, HENRY S., Hallettsville, Tex., who is but twenty years old, has been elected City Attorney and taken the oath of office with Mayor H. M. Trippett.

POWERS, J. S., New Iberia, La., has defeated Robert Brown for Mayor.

PUFFER, WILLIAM L., Boston, Mass., Electrical Engineer, Equitable Building, has been engaged by Mayor Hibbard to examine the proposed contract recently drawn up by the city for lighting the streets by the Edison Electric Illuminating Company for a period of five years.

RICE, MAJOR LEWIS F., Architect and Civil Engineer, of Boston, died April 13, at the age of 70; he was a graduate of Rensselaer Polytechnic Institute, and was employed on the Brooklyn water works and the Troy & Greenfield R. R. before the Civil War; after the war, during which he was promoted from Lieutenant to Major, he went West and served on the St. Louis water works extension for four years; he then conducted a private practice and designed water and sewerage systems in a number of New England cities. In 1890 he became engineer and architect for the American Bell Telephone Co. He was a member of the American Society of Civil Engineers.

ROSEWATER, ANDREW, Omaha, Neb., for twenty-five years City Engineer of Omaha, died April 17.

SAWYER, B. G., Swanton, Vt., has been engaged as Superintendent of the Street and Water departments by the Village Trustees to succeed the late B. M. Bliss. Mr. Sawyer has been an employee of the Boston & Maine Railroad at Swanton for about twenty-five years.

SCRIBNER, HERBERT D., Pacific Coast manager for the Allis-Chalmers Company, who stood high in the electrical world and who built the first electrical road on the Pacific Coast, killed himself in his office recently after a long illness.

SHERROD, JOHN, City Clerk of Tusculumbia, Ala., and W. L. Chitwood, City Attorney, have been re-elected, and W. T. Rorex has been elected City Treasurer.

STEELE, GEORGE A., Chief of the Fire

Department of Providence, R. I., until his retirement a few weeks ago, was presented with a purse of gold by the members of the Providence department when he presided over the annual meeting of the Firemen's Relief Association. District Chief William F. Smith has been chosen to succeed Chief Steere as head of the Relief Association.

TREWARTHA, WILLIAM, of Kennett, Cal., and L. L. Stillson and Bernhard Golinsky have been elected Fire Commissioners.

TYSON, FILMORE, Chief of the Fire Department of Louisville, Ky., and President of the National Association of Fire Chiefs, was injured about the arms and head when his automobile, going at high speed from one fire to another, was struck by a street car and demolished. He was thrown some distance, but escaped with only a number of lacerations and bruises.

West Virginia cities have elected Mayors as follows:

Parkersburg—W. B. Pedigo, re-elected over E. E. Shirmer and Wesley Hull.

Clarksburg—Frank Moore over Mayor E. J. Wood and Dr. Floures.

St. Marys—R. H. Traplett

Salem—J. F. Randolph over W. L. Steelby.

Illinois cities at recent elections chose the following Chief Executives:

Springfield—John S. Schnepf over former Lieutenant Governor Lawrence Y. Sherman.

Lake Forest—F. H. Gade.

Moline—Andrew Olson, re-elected, over

City Clerk C. G. Carlson.

Macomb—John M. Keefer over Thomas J.

Dudman.

Quincy—John A. Steinbach, Mayor for ten

years until defeated by John H. Best last

year, over Mayor Best.

Peoria—E. N. Woodruff, former Mayor,

over Mayor Thomas O'Connor.

East St. Louis—Silas Cook, re-elected,

over Charles S. Lambert.

Belleville—Fred J. Kern, re-elected for

fourth term.

Geneseo—John H. O'Brien, former Alder-

man, over Dr. Charles S. Young, by 28

votes, the largest majority accorded a

Mayoralty candidate for twenty years.

Galesburg—George Sanderson, hotel clerk

and son of the first Mayor, over Max J.

Mack.

Freeport—W. T. Rawleigh over Louis

Bauscher.

Rock Island—George W. McCaskrin over

Henry Carse.

Kansas cities have elected Chief Ex-

ecutives as follows:

Kansas City—Judge U. S. Guyer over

John W. West.

Salina—Mayor Charles B. Kirtland, re-

-elected; no opposition.

Atchison—Dr. G. W. Allaman over Mayor

A. M. King.

Chapman—Pat Scanlon over I. C. Sage.

Leavenworth—Omar Abernathy.

Solomon—W. L. Olson.

Wichita—Charles L. Davidson over Mayor

John Graham.

Enterprise—C. P. Peterson.

Topeka—William Green, re-elected.

Woodbine—S. W. Muenzenmeyer; no con-

test.

Sterling—C. Fair, re-elected.

Lawrence—S. D. Bishop over Prof. W. H.

Carruth of the University of Kansas.

Manchester—R. T. Holmes.

Fredonia—F. S. Redding over C. E.

Burke.

Tonganoxie—John Pierce over J. S. Grist.

Hope—T. H. Palmer.

Hutchinson—Judge F. L. Martin over

Mayor John P. Harsha.

Jewell City—E. D. Fisher, re-elected for

ninth term.

Concordia—Homer Kennett over Frank

Baker.

Winfield—Charles M. Wallace.

Osage City—Ex-Senator H. B. Miller over

Dr. T. M. Zane; both have served two terms

as Mayor.

Junction City—W. F. Munzen, re-elected;

no opposition.

Clay Center—George W. Hanna; third

consecutive election.

Cherryvale—C. W. Randolph.

Burlington—E. W. Baker over I. B.

Stinehart.

Alma—John H. Steuwe.

Parsons—Josiah L. Waite, Sr.

Abilene—A. W. Rite, re-elected, over Dr.

T. R. Conklin.

Pittsburg—Morris Claggett over C. L.

Haun.

Morton—J. R. Thompson over Mayor C.

R. Williams.

Cimarron—Frank M. Luther, re-elected

for second term.

## PROPOSALS

### PROPOSAL FOR FIRE HOSE

The City of Burlington, New Jersey, invites proposals for Twelve Hundred Feet (1200 feet) of "Double Jacket, Rubber Lined Cotton Fire Hose, with Screw Couplings." The name of the successful bidder to be stenciled on the Hose, and the year of manufacture to be plainly stamped on the coupling.

Said Hose to be tested in Burlington, at a pressure to be determined by, and in the presence of the Board of Engineers of the Fire Department and the Fire Committee of Common Council, and at the expense of the successful bidder.

Proposals must be sealed and delivered to the City Clerk on or before Tuesday, May 4th, 1909, at 8 o'clock P. M., when they will be publicly opened and read before Common Council, and any others who may desire to be present.

Bidders will accompany proposals with samples and complete specifications, and will name the date on or before which delivery will be made in Burlington, the price must include all transportation in guaranteed good order, the name and location of the manufacturer must be stated and in case of an agent his authority must be shown, and the bid confirmed over the signature of the manufacturer.

The right is expressly reserved to reject any or all proposals.

By direction of Common Council,

C. EARL HOPKINS,  
HARRY CARTER,  
GEORGE W. SISOM,  
Committee on Fire.

THOMAS S. MOONEY,  
City Clerk. (16)

### MAIN INTERCEPTING SEWER

Syracuse, N. Y.

Sealed proposals for the construction of a portion of the main intercepting sewer with connections, etc., in Syracuse, N. Y., will be received at the offices of the Syracuse Intercepting Sewer Board, Room 112, Court House, in said city, until twelve o'clock noon, May 18, 1909.

The work covers approximately 2 1-3 miles main intercepting sewer from 90 to 33 inches diameter. Its principal items are 90,000 cubic yards excavation and 6,000 cubic yards concrete.

Proposals must be made upon blanks which will be furnished upon application. They must be accompanied by New York draft or certified check upon a Syracuse bank for \$10,000.00, that the successful bidder will execute contract within five days after award by Board.

Drawings, specifications and form of contract are on file at the offices of the Board, where they may be examined. Copies thereof can be obtained by depositing the sum of ten dollars to insure their return in acceptable condition within thirty days from the date upon which bids are to be opened.

HARRY J. HAMLIN,  
(15-18) Secretary.

### CONCRETE RETAINING WALL

City Engineer's Office,

Charleston, S. C., March 24, 1909.

Sealed proposals, in duplicate, will be received until 12 M., May 3, 1909, for constructing 4,000 feet, more or less, of concrete retaining wall at Charleston, S. C., and for filling in behind same (670,000 cu. yds., more or less) with material dredged from river. The right is reserved to reject any or all bids.

J. H. DINGLE,  
City Engineer.

### SEWER SYSTEM AND AUXILIARY WATER SUPPLY SYSTEM

#### Notice to Contractors

City and County of San Francisco, Cal.

The attention of contractors is directed to the fact that the City and County of San Francisco proposes to construct a new Sewer System and an Auxiliary Water Supply System for Fire Protection. The total cost of the Sewer System will be \$4,000,000.00. The estimated cost of the work included in the individual contracts to be let during the current year ranges between \$50,000.00 and \$300,000.00. A number of adjacent contracts will, from time to time, be let on the same date, giving the contractors an opportunity to secure contracts for several pieces of work at the same time.

The total cost of the Auxiliary Water Supply System is \$5,200,000.00. The work which it is proposed to contract for during the current year includes the construction of 50 reinforced concrete fire cisterns, the laying of 91 miles of cast-iron water pipe, the construction of two salt-water pumping stations, and the construction of two reinforced concrete reservoirs.

On all of the above contracts, monthly payments will be made.

Further information can be obtained from Robt. Loughery, Secretary of the Board of Public Works, San Francisco, Cal.

CHAS. A. DAY,

President.

MICHAEL CASEY,

JOHN D. MCGILVERAY,

Commissioners of Public Works.

MARSDEN MANSON,  
City Engineer.

(13-17)

### BRICK PAVING

Cadiz, Ohio.

Sealed proposals will be received by the Clerk of the Village of Cadiz, Ohio, until 12 o'clock noon, Wednesday, May 5th, 1909, for 8,048 square yards more or less of street paving with brick. Engineers: The Riggs & Sherman Co., Toledo, Ohio.

Forms of proposals may be had at the office of the Village Clerk. The right is reserved to reject any or all bids.

W. H. LUCAS, Clerk.

### BRICK PAVING

Sidney, Ohio.

Sealed bids will be received by the Board of Public Service of the City of Sidney, State of Ohio, at the office of said Board until 12 o'clock, noon, Monday, May 3, 1909, for furnishing the necessary labor and materials for paving with brick the following streets and avenues: West avenue, Water street, South street, Main street, Court street, North street and Miami avenue, according to plans and specifications on file in said office. Each bid must contain the full name of every person or company interested in the same, and be accompanied by a New York or Chicago draft in the sum of \$1,200, to the satisfaction of the Board, as a guarantee that if the bid is accepted a contract will be entered into and its performance promptly secured. Should any bid be rejected, such draft will be forthwith returned to the bidder, and should any bid be accepted, such draft will be returned upon the proper execution and securing of the contract.

Bidders are required to use the printed forms, which will be furnished on application.

The right is reserved to reject any and all bids.

By order of the Board of Public Service.  
W. L. HEISER,  
Clerk.

Sidney, Ohio, April 8, 1909.

### MAUMEE RIVER BRIDGE

Toledo, Ohio.

Sealed proposals will be received by the Board of Public Service until 12 o'clock noon, July 1, 1909, for furnishing the necessary labor and material for the construction of a reinforced concrete arch bridge, excepting lift draw, together with the necessary foundations, abutments, piers, approaches and any and all other necessary parts thereof, over the Maumee River, in the line of Cherry street from where the northwest line of Water street intersects Cherry street to the center line of Main street. Said bridge shall be constructed of concrete and steel, and in accordance with the detailed plans, profiles and specifications thereon on file in the office of the Board of Public Service.

Proposals will also be considered on alternative designs under considerations set forth in Section 43 of said specifications. The contract bond will be twenty-five per centum (25%) of the amount of the contract. The Board of Public Service reserves the right to reject any and all bids. Payment will be made as stipulated in the form of contract for the performance of the above work, and which form of contract is on file in the office of said Board of Public Service. All bids must be written in ink, and the price for each item must be written out in full as well as in figures. All labor and material necessary for the improvement aforesaid shall be bid on separately, with the price thereof, and written in as aforesaid.

Bidders must use the printed forms, as none other will be received. Bidders will be required to endorse their names on the outside of the envelope containing their proposal and what the bid is for, the same to be filed with the Secretary of the Board of Public Service. Plans and specifications can be seen at the office of the Chief Engineer of the Board of Public Service, and same may be obtained upon terms to be ascertained by applying at the office of said Board, 223 Valentine Bldg., Toledo, Ohio.

By order of the Board of Public Service.

REYNOLD VOIT,  
Secretary.

### REINFORCED CONCRETE RESERVOIR

South Bend, Ind.

Sealed proposals will be received by the Board of Public Works of the City of South Bend, Ind., 10 o'clock A. M., April 27, 1909, for furnishing all material and labor for constructing a reinforced concrete reservoir of 1,000,000 gallons capacity.

Plans and specifications are on file with said Board and a certified check amounting to 2½ per cent of the bid will be required with the proposal.

The right to reject all bids is reserved.

W. A. McINERNY, President,

Board of Public Works.

A. J. HAMMOND,  
City Engineer.

### BRICK PAVEMENT

Cresco, Ia.

Sealed proposals will be received by the City Clerk of the City of Cresco, Ia., until 8 P. M., May 10, for furnishing material and constructing about 9,000 square yards of brick pavement on cement concrete foundation, to be commenced on or before June 1, 1909, and to be fully completed on or before August 15, 1909.

Payment to be made by 6 per cent assessment certificates and 6 per cent city warrants. Certified check, \$500. Bond, \$5,000.

### NOTICE TO ROAD BUILDERS

Ashton, S. Dak.

Sealed bids will be received by the undersigned up to 12 P. M., Saturday, May 15, 1909, for the regrading of five miles of road and grading ten miles of new road in Jefferson Township, Spink Co., So. Dak.

Plans and specifications may be examined at Clerk's Office or information received by addressing any of the Supervisors.

Each bid must be accompanied by a certified check of \$50, payable to the Township of Jefferson, as a guarantee that the successful bidder will enter into contract and furnish satisfactory security bond in case his bid is accepted.

Board of Supervisors reserves the right to reject any or all bids.

Bids will be opened at the Township Clerk's Office on the above date at 2 P. M.

HENRY SPARLING, Chairman.  
E. C. TOWNLEY,  
ALBERT YOUNG,  
Twp. Board of Supervisors.  
O. B. OLSON, Clerk.